SUMMER 2021 – University of British Columbia / MPPGA

PPGA 541 Policy Dimensions of Energy Systems

Course Syllabus
Summer 2021, Tu-Th, 9-12
Online through Canvas and Zoom

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0ffice Hours: Tuesday 12:15-1:15 on zoom

UBC's Point Grey Campus is located on the traditional, ancestral, and unceded territory of the xwməθkwəy̓əm (Musqueam) people. The land it is situated on has always been a place of learning for the Musqueam people, who for millennia have passed on their culture, history, and traditions from one generation to the next on this site.

The course will address the energy policy process and energy governance, focusing on the opportunities for and constraints on the clean energy transition.

At the successful completion of the course, students will be able to:

1. Describe energy systems at multiple scales
2. Describe opportunities and challenges for deep decarbonization
3. Thoroughly describe the institutions responsible for energy policy-making in one or more jurisdictions
4. Identify and analyze interests, positions, and power of energy policy stakeholders
5. Compare the social, economic, political, and environmental attributes of different energy technology and policy choices
6. Analyze alternative energy policy instruments and their consequences
7. Describe energy planning and approval processes in a jurisdiction
8. Describe the distinctive challenge of addressing energy poverty in developing nations
9. Articulate goals and outcomes of energy policy in plain language to stakeholders, often with diverse values, needs and world-views

The main assignments for PPGA 541 are a video presentation and 2 papers examining different aspects of the decarbonization challenges for a specific political jurisdiction (nation or state/province). Assessment will be based on following components:

- Oral briefing video (20%) – described below
- 2 papers (60% total) – described below
- Discussion questions 10%
- Synchronous class participation 10%

Assignments are described in more detail below. Late assignments: There will be a penalty of 4% per calendar day for late papers.

Schedule of Topics and Readings: subject to revision with notice. Check Canvas modules for up to date readings.

Module 1: Overview; Technology and Policy Choices

May 11: Course overview: the decarbonization challenge and roadmap for the course

Project Drawdown. 2020. "Drawdown Framework." https://www.drawdown.org/drawdown-framework

BNEF. 2020. *New Energy Outlook 2020*. October. Pp. 25-28 only. https://about.bnef.com/new-energy-outlook/#toc-download

United Nations Environmental Programme. "The Six Sector Solution to Climate Change Infographic." https://www.unep.org/interactive/six-sector-solution-climate-change/

Carbon Tracker. 2021. *Climate Summit Momentum: Paris Commitments Improved Warming Estimate to 2.4°C.* May 2021. https://climateactiontracker.org/documents/853/CAT_2021-05-04_Briefing_Global-Update_Climate-Summit-Momentum.pdf

Further information:

Kelly Levin and Chantal Davis. 2019. "What Does "Net-Zero Emissions" Mean? 6 Common Questions, Answered." *World Resources Institute* September 17 https://www.wri.org/blog/2019/09/what-does-net-zero-emissions-mean-6-common-questions-answered

United Nations Environmental Programme. 2020. *Emissions Gap Report 2020 Executive Summary*. https://wedocs.unep.org/bitstream/handle/20.500.11822/34438/EGR20ESE.pdf?sequence=25

Deep Decarbonization Pathways Project, *Pathways to Deep Decarbonization – Executive Summary 2015 Report*. (SSDN and IDDRI).

May 13: Energy 101: Systems, Choices, and Consequences; overview of the energy system from a policy perspective

Canadian Council of Academies. 2015. Technology and Policy Options for a Low-Emission Energy System in Canada. Ottawa (ON): The Expert Panel on Energy Use and Climate Change, Council of Canadian Academies. Pp. 19-26. http://www.scienceadvice.ca/uploads/eng/assessments%20and%20publications%20and%20news%20releases/magna/energyuse_fullreport_en.pdf

George Hoberg and Guillaume Peterson. 2015. "Multi-Criteria Decision-Making for Comparing Energy Choices – A Hoberg Course Brief." February 2. http://greenpolicyprof.org/wordpress/wp-content/uploads/2015/02/Hoberg-course-brief-MCA-final.pdf

Sample one of the following for the assignment in discussions questions:

International Energy Agency. 2020. World Energy Outlook 2020. October. https://www.iea.org/reports/world-energy-outlook-2020 (full report available for download from UBC Library) OR

BP. 2020. Statistic Review of World Energy. https://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy.html OR

International Energy Agency. 2020. *Renewables 2020 - Analysis and forecast to 2025* December 16. https://doi-org.ezproxy.library.ubc.ca/10.1787/c74616c1-en

Further information

Ankit Bhardwaj, Madhura Joshi, Radhika Khosla, Navroz K. Dubash. 2019. "More priorities, more problems? Decision-making with multiple energy, development and climate objectives." *Energy Research & Social Science* 49: 143-157, https://doi.org/10.1016/j.erss.2018.11.003.

Canada Energy Regulator. 2020. *Canada's Energy Future 2020.* October. https://www.cer-rec.gc.ca/en/data-analysis/canada-energy-future/2020/index.html

Randolph J, Masters GM. 2018. *Energy for Sustainability: Foundations for Technology, Planning, and Policy*. 2nd ed. Chapter 4: Fundamentals of Energy Science. Chicago: Island Press; 2018. P. 95-132.

Johan Rockström et al, "A roadmap for rapid decarbonization," *Science* 355, 6331 (2017): 1269-1271.

Jacobson MZ, Delucchi MA, Cameron MA, Frew BA. 2015. "Low-cost solution to the grid reliability problem with 100% penetration of intermittent wind, water, and solar for all purposes." Proc Natl Acad Sci USA 112:15060–1506

Clack, Christopher, et al. 2017. Evaluation of a proposal for reliable low-cost grid power with 100% wind, water, and solar. Proc Natl Acad Sci USA 114,26: 6722–6727

May 18: Policy Instruments – the range of policy instruments relevant to energy and how they compare on a variety of criteria

Jaccard, Mark. 2020. *The Citizen's Guide to Climate Success: Overcoming Myths that Hinder Progress.* Cambridge University Press. Chapter 6. (online through UBC library)

Michaelowa, A., M. Allen, and F. Sha. 2018. "Policy instruments for limiting global temperature rise to https://doi.org/10.1080/14693062.2018.1426977

Read one of the following:

Noah Kaufman, John Larsen, Ben King, and Peter Marsters. 2020. "Output-based rebates: An alternative to border carbon adjustments for preserving US competitiveness." December. Center for Global Energy Policy, Columbia University. https://www.energypolicy.columbia.edu/sites/default/files/file-uploads/OBR%20commentary,%20designed%20v5,%2012.01.20.pdf OR

James Bacchus. 2019. "What Is a Climate Response Measure? Breaking the Trade Taboo in Confronting Climate Change." CIGI Paper No. 220. Centre for International Governance Innovation. https://www.cigionline.org/publications/what-climate-response-measure-breaking-trade-taboo-confronting-climate-change

Stuart Evans, Michael A. Mehling, Robert A. Ritz & Paul Sammon (2020) Border carbon adjustments and industrial competitiveness in a European Green Deal, *Climate Policy*, DOI: 10.1080/14693062.2020.1856637

Further information:

Danny Cullenward and David G. Victor. 2021. *Making Climate Policy* Work. Polity.

Klaus Gugler, Adhurim Haxhimusa, Mario Liebensteiner. 2020. "Effectiveness of climate policies: Carbon pricing vs. subsidizing renewables." *Journal of Environmental Economics and Management*, 102405, https://doi.org/10.1016/j.jeem.2020.102405.

Rhodes, Ekaterina and Mark Jaccard. 2013. "A Tale of Two Climate Policies: Political Economy of British Columbia's Carbon Tax and Clean Electricity Standard." *Canadian Public Policy* 39, S2: S37-S51.

Jaccard, M., L. Agbenmabiese, C. Azar, A. de Oliveira, C. Fischer, B. Fisher, A. Hughes, M. Ohadi, Y. Kenji and X. Zhang, 2012: Chapter 22 - Policies for Energy System Transformations: Objectives and Instruments. In Global Energy Assessment - Toward a Sustainable Future, Cambridge University Press, Cambridge, UK and New York, NY, USA and the International Institute for Applied Systems Analysis, Laxenburg, Austria, pp. 1549-1602.

Module 2: The Political Economy of Energy Transitions

May 20: The Political Economy of Energy Transitions I

Gregory C. Unruh, "Understanding carbon lock-in," *Energy Policy* 28 (2000) 817-830. https://systeminnovationforsustainability.com/tag/socio-technical-systems/

Geels, Frank et al. 2016. "The enactment of socio-technical transition pathways: A reformulated typology and a comparative multi-level analysis of the German and UK low-carbon electricity transitions (1990–2014)." *Research Policy* 45: 896-913. Read only sections 1 and 2.

Daniel Nohrstedt, "Do Advocacy Coalitions Matter? Crisis and Change in Swedish Nuclear Energy Policy," *Jnl of Public Admin Research and Theory* 20 (2010): 309-333. doi:10.1093/jopart/mun038

Further information

Cameron Roberts, et al. 2018. "The politics of accelerating low-carbon transitions: Towards a new research agenda." *Energy Research & Social Science* 44 (2018): 304–311. https://doi.org/10.1016/j.erss.2018.06.001

Kern, Florian, and Karoline S. Rogge. 2018. "Harnessing theories of the policy process for analysing the politics of sustainability transitions: A critical survey." *Environmental innovation and societal transitions* 27 (2018): 102-117.

Lachapelle, Erick, and Matthew Patterson. 2013. Drivers of national climate policy. Climate Policy 13, No. 5, 547–571, http://dx.doi.org/10.1080/14693062.2013.811333 OR

Steves, Franklin and Alexander Teytelboym. 2013. Political Economy of Climate Change Policy. Smith School Working Paper Series. October. Working Paper 13-06. http://www.smithschool.ox.ac.uk/publications/wpapers/workingpaper13-06.pdf

May 25: The Political Economy of Energy Transitions II

Hochstetler, Kathryn. (2020). *Political Economies of Energy Transition: Wind and Solar Power in Brazil and South Africa*. Cambridge: Cambridge University Press. doi:10.1017/9781108920353. Chapter 1.

Kitschelt, H. P. (1986). Political opportunity structures and political protest: Anti-nuclear movements in four democracies. British Journal of Political Science, 16(1), 57-85. doi:10.1017/S000712340000380X

Oksan Bayulgen & Jeffrey W. Ladewig, "Vetoing the future: political constraints and renewable energy," *Environmental Politics* 26 (2017): 49-70 http://dx.doi.org/10.1080/09644016.2016.1223189

Further information

Green, F., Denniss, R. 2018. "Cutting with both arms of the scissors: the economic and political case for restrictive supply-side climate policies." *Climatic Change* 150, 73–87 (2018). https://doi.org/10.1007/s10584-018-2162-x

Jonas Meckling. 2018. "Governing renewables: Policy feedback in a global energy transition." *Environment and Planning C: Politics and Space* 37 (2): https://doi.org/10.1177/2399654418777765

Roger Karapin, "Wind-Power Development in Germany and the United States: Structural Factors, Multiple-Stream Convergence, and Turning Points," in Andreas Duit, ed., *State and Environment: The Comparative Study of Environmental Governance*, Cambridge: MIT Press, 2014, pp. 111-137

Espen Moe, **"**Vested Interests, Energy Policy and Renewables in Japan, China, Norway, and Denmark," in *The Political Economy of Renewable energy and Energy Security*. Edited by Espen Moe and Paul Midford http://www.palgraveconnect.com/pc/doifinder/10.1057/9781137338877.0023

George Hoberg, "The Battle Over Oil Sands Access to Tidewater: A Political Risk Analysis of Pipeline Alternatives." *Canadian Public Policy* Volume 39, No. 3, pp. 371-391.

George Hoberg and Jeffrey Phillips, "Playing Defence: Early Responses to Conflict Expansion in the Oil Sands Policy Subsystem," *Canadian Journal of Political Science* 44 (2011): pp 507-527.

May 27: Energy Planning and Approval Strategies, and the Challenge of Social Acceptance

Wilson, Rachel, and Bruce Biewald. 2013. Best Practices in Electric Utility Integrated Resource Planning Examples of State Regulations and Recent Utility Plans. Prepared by Synapse Energy Economicsfor the Regulatory Assistance Project. http://www.synapse-energy.com/sites/default/files/SynapseReport.2013-06.RAP_.Best-Practices-in-IRP.13-038.pdf

Hoberg, George. 2021. *The Resistance Dilemma: Place-Based Movements and the Climate Crisis.* MIT Press, August 2021. Chapters 1, 10, 11.

Further information

Fast, Stewart et al. 2016. "Lessons learned from Ontario wind energy dispute." *Nature Energy* 1, 2: 1-7.

Schreurs, Miranda and Dörte Ohlhorst. 2015. NIMBY and YIMBY: Movements For and Against Renewable Energy in Germany and the United States. In. Carol Hager and Alice Haddad, eds. *NIMBY is Beautiful: Cases of Local Activism around the World*. Berghahn Books.

Devine Wright, Patrick, Hannah Devine Wright, and Richard Cowell. 2016. *What do we know about overcoming barriers to siting energy infrastructure in local areas?* Report prepared for UK Department of Energy & Climate Change. http://orca.cf.ac.uk/93905/1/DECC_Infrastructure_PlacewiseLtd.pdf

Mark Jaccard, Noel Melton, and John Nyboer, "Institutions and Process for scaling up renewables: Run-of-river hydropower in British Columbia," *Energy Policy* 39 (2011): 4042-4050.

Module 3: Regional Case Studies

June 1: Developed Economies: The European Union and United States

"Starting low, reaching high? Sequencing in EU climate and energy policies." *Environmental innovation and societal transitions*, Volume 37, December 2020, Pages 140-155 https://doi.org/10.1016/j.eist.2020.08.006

Matto Mildenberger, *Carbon captured: how business and labor control climate politics*, MIT Press, 2020, Chapter 5. (available through UBC library online)

Optional: "Biden's Climate Plan Could Reshape America (Live w/ Julian NoiseCat)", *A Matter of Degrees* podcast. https://a-matter-of-degrees.simplecast.com/episodes/bidens-climate-plan-could-reshape-america-live-w-julian-noisecat

Further information

Germany's Energiewende – The Easy Guide, *Clean Energy Wire*
"What is the Green Deal? A Wonk's Guide." *Politico* October 20, 2020.
EU, Climate strategies & targets
Mario Neukirch. 2020. "Grinding the grid: Contextualizing protest networks against energy transmission projects in Southern Germany." *Energy Research & Social Science*, Volume 69, 101585, https://doi.org/10.1016/j.erss.2020.101585.
Stuart Evans, Michael A. Mehling, Robert A. Ritz & Paul Sammon (2020) Border carbon adjustments and industrial competitiveness in a European Green Deal, *Climate Policy*, DOI: 10.1080/14693062.2020.1856637
Geels, Frank et al. 2016. "The enactment of socio-technical transition pathways: A reformulated typology and a comparative multi-level analysis of the German and UK low-carbon electricity transitions (1990–2014)." *Research Policy* 45: 896-913.
E Schmid, A Pechan, B Knopf, "Putting an energy system transformation into practice: The case of the German Energiewende', *Energy Research & Social Science* 11 (2016): 263–275 DOI:10.1016/j.erss.2015.11.002 open access post-print PDF
Denny Ellerman, Claudio Marcantonini and Aleksandar Zaklan, "The European Union Emissions Trading System: Ten Years and Counting," Rev Environ Econ Policy (Winter 2016)10 (1): 89-107. doi:10.1093/reep/rev014
Erik Laes, Leen Gorissen, and Frank Nevens, "A Comparison of Energy Transition Governance in Germany, The Netherlands and the United Kingdom," Sustainability 2014, 6, 1129-1152.
International Energy Agency, *Energy Policies of IEA Countries: The United States 2019*, accessible through UBC library.
Ray Galvin, Noel Healy, "The Green New Deal in the United States: What it is and how to pay for it," *Energy Research & Social Science*, Volume 67, 2020, 101529, https://doi.org/10.1016/j.erss.2020.101529
Ezra Klein, "How to decarbonize America — and create 25 million jobs." The Ezra Klein Show. August 27, 2020.

June 3: Middle Income Countries: China and India

IEA, "China's Emissions Trading Scheme," June 2020
Pritish Behuria. (2020). The politics of late late development in renewable energy sectors: Dependency and contradictory tensions in India's National Solar Mission. World Development, 126, 104726. https://doi.org/10.1016/j.worlddev.2019.104726
"Are dictatorships better than democracies at fighting climate change?" *The Economist*, September 21, 2019.
Read one of the following:
Laszlo Varro, An Fengquan, "China's net-zero ambitions: the next Five-Year Plan will be critical for an accelerated energy transition," Commentary — 29 October 2020, or

Dubash, K Navroz,Swain, Ashwini, Bhatia, Parth. (2019). "The Disruptive Politics of Renewable Energy." *The India Forum* https://www.theindiaforum.in/article/disruptive-politics-renewable-energy

Further information

Navroz K. Dubash , ed. 2019. *India in a Warming World: Integrating Climate Change and Development*. Oxford. DOI: 10.1093/oso/9780199498734.001.0001

Navroz K. Dubash, Sunila S. Kale, and Ranjit Bharvirkar. 2018. *Mapping Power: The Political Economy of Electricity in India's States*. Oxford. DOI:10.1093/oso/9780199487820.001.0001

Hochstetler, Kathryn. (2020). *Political Economies of Energy Transition: Wind and Solar Power in Brazil and South Africa* (Business and Public Policy). Cambridge: Cambridge University Press. doi:10.1017/9781108920353. Chapter 1, 5, 6.

Michael Jacob et al. 2020. "Actors, objectives, context: A framework of the political economy of energy and climate policy applied to India, Indonesia, and Vietnam." *Energy Research & Social Science* Volume 70, December 2020, 101775 https://doi.org/10.1016/j.erss.2020.101775

Thomas Stoerk, Daniel J. Dudek & Jia Yang (2019) China's national carbon emissions trading scheme: lessons from the pilot emission trading schemes, academic literature, and known policy details, Climate Policy, 19:4, 472-486, DOI: 10.1080/14693062.2019.1568959

A Katre, A Tozzi. 2019. "Using hugs, carrots and sticks: How agents exercise power in the transition to community-owned energy systems in remote India." *Energy Research & Social Science*, Volume 54, August 2019, Pages 129-139 https://doi.org/10.1016/j.erss.2019.04.008

Module 4 Energy Justice and Poverty

June 8: Energy Justice

Kirsten Jenkins, Darren McCauley, Raphael Heffron, Hannes Stephan, Robert Rehner. 2016. "Energy justice: A conceptual review." *Energy Research & Social Science*, Volume 11, 2016, Pages 174-182 https://doi.org/10.1016/j.erss.2015.10.004.

Choose one of more of the following:

Christina E. Hoicka, Katarina Savic, Alicia Campney. 2021. "Reconciliation through renewable energy? A survey of Indigenous communities, involvement, and peoples in Canada." *Energy Research & Social Science* 74: 101897, https://doi.org/10.1016/j.erss.2020.101897.

Jaskoski, Maiah. 2020. "Participatory Institutions as a Focal Point for Mobilizing: Prior Consultation and Indigenous Conflict in Colombia's Extractive Industries." *Comparative Politics* (July): 537-556. DOI: 10.5129/001041520X15757670821639

Curley, A. 2018. A failed green future: Navajo Green Jobs and the energy "transition" in the Navajo Nation. *Geoforum* 88: 57-65.

Further information

Oliver Johnson, et al. 2020. "Intersectionality and energy transitions: A review of gender, social equity and low-carbon energy." *Energy Research & Social Sciences* (December 2020), 101774. https://doi.org/10.1016/j.erss.2020.101774

Sovacool, B. K., & Dworkin, M. H. 2015. "Energy justice: Conceptual insights and practical applications." *Applied Energy*, 142, 435-444.

June 10: Energy Poverty

"Understanding Energy Poverty in the World," Chapter 2 of Michaël Aklin, Patrick Bayer, S.P. Harish, Johannes Urpelainen *Escaping the Energy Poverty Trap*: *When and How Governments Power the Lives of the Poor*, MIT Press, 2018. Available on-line through UBC library.

And any one of the following:

Meena Khandelwal, et al, "Why Have Improved Cook-Stove Initiatives in India Failed?, *World Development*, Volume 92, 2017, Pages 13-27, https://doi.org/10.1016/j.worlddev.2016.11.006.

Ecotrust Canada, *Moving toward energy security in BC's rural, remote and Indigenous communities* (2020), https://ecotrust.ca/latest/research/moving-toward-energy-security-in-bcs-rural-remote-and-indigenous-communities-2020/

Escaping the Energy Poverty Trap: *When and How Governments Power the Lives of the Poor*, MIT Press, 2018, Chapters 4, 5, or 6. Available on-line through UBC library.

Poor People's Energy Outlook 2019 - Enabling Energy Access: from Village to Nation https://infohub.practicalaction.org/bitstream/handle/11283/622030/PPEO%202019_Book_For%20Web.pdf?sequence=1

Sustainable Energy for All, SEforALL Analysis of SDG7 Progress – 2020 https://www.seforall.org/data-stories/seforall-analysis-of-sdg7-progress-2020

International Energy Agency, Energy Access Outlook 2017, World Energy Outlook Special Report, Report — October 2017 https://www.iea.org/reports/energy-access-outlook-2017

Further information

Antoine Halff, Benjamin K. Sovacool, and Jon Rozhon, Energy Poverty: Global Challenges and Local Solutions, Oxford Scholarship Online, Chapter 2, and pick one of Chapters 10-14.

Module 5 – Transitions

June 15: Just Transitions for Workers and Communities

Green, Fergus & Ajay Gambhir. 2020. "Transitional assistance policies for just, equitable and smooth low-carbon transitions: who, what and how?" *Climate Policy* 20:8, 902-921, DOI: 10.1080/14693062.2019.1657379

Choose one of the following:

Pao-Yu Oei, Hanna Brauers & Philipp Herpich (2020) Lessons from Germany's hard coal mining phase-out: policies and transition from 1950 to 2018, Climate Policy, 20:8, 963-979, DOI: 10.1080/14693062.2019.1688636

Canada's Task Force on Just Transition for Canadian Coal Power Workers and Communities. 2018. *Final Report by the Task Force on Just Transition for Canadian Coal Power Workers and Communities*. December. https://www.canada.ca/en/environment-climate-change/services/climate-change/task-force-just-transition/final-report.html

David J. Hess, Rachel G. McKane, Kaelee Belletto. 2021. "Advocating a just transition in Appalachia: Civil society and industrial change in a carbon-intensive region." *Energy Research & Social Science* 75, 102004, https://doi.org/10.1016/j.erss.2021.102004.

Ashim Roy, Benny Kuruvilla, Ankit Bhardwaj. 2019. "Energy and Climate Change: A Just Transition for Indian Labour." In Navroz Dubash, ed., *India in a Warming World: Integrating Climate Change and Development*. Oxford. DOI:10.1093/oso/9780199498734.003.0017

Further information:

Greg Muttitt & Sivan Kartha. 2020. Equity, climate justice and fossil fuel extraction: principles for a managed phase out, Climate Policy, 20:8, 1024-1042, DOI: 10.1080/14693062.2020.1763900

Coal Transitions Research Hub, https://coaltransitions.org/about/hub/

June 17: Can We Do It in Time? The Timing of Energy Transitions

Benjamin K. Sovacool, "How long will it take? Conceptualizing the temporal dynamics of energy transitions," *Energy Research and Social Sciences* 13 (2016): 202–215. http://dx.doi.org/10.1016/j.erss.2015.12.020

Vaclav Smil, "Examining energy transitions: A dozen insights based on performance," Energy Research and Social Sciences 22 (2016) 194–197.

Sovacool, Benjamin K, and Frank W.Geels Further reflections on the temporality of energy transitions: A response to critics. *Energy Research & Social Science* 22: 232-7

Further information

Johan Rockström et al, "A roadmap for rapid decarbonization," *Science* 355, 6331 (2017): 1269-1271.

Description of Assignments for PPGA 541

Oral briefing: due May 21 (20%)**:** Your minister has been asked to give a presentation to the International Energy Agency, which has just decided to conduct a review of your jurisdiction's energy system and policies. You are tasked with drafting a slide deck and recording a 10-minute video characterizing the energy system and energy and climate policies of your jurisdiction.

1. Describe the sources of energy supply and consumption in your jurisdiction, broken down by the following categories (graphics preferred):
    - Fossil fuel (separate out coal, oil, natural gas)
    - Nuclear
    - Renewables (separate out hydro, solar, wind, biomass, other if possible)
2. Describe the most important energy and climate policies in your jurisdiction related to decarbonization, including those that provide the most significant barriers to decarbonization

Assessment components:

- Quality of information conveyed in video and slide deck (10%)
- Quality of presentation (5%)
- Quality of comments on 5 other videos (5%)

Paper 1 due June 6 (35%): Your minister has directed you to prepare a background paper characterizing the policy regime for clean energy policy development in your jurisdiction (maximum 2500 words)

1: Describe the political institutions for energy and climate policy-making in your jurisdiction, with a particular focus on opportunities and barriers to major policy change.

2: Describe the major energy stakeholders including vested interests. Focus on which actors are the biggest obstacles to decarbonization and which are the progressive change agents. *Note: prior to entering government your minister was an academic political scientist, and therefore expects you to incorporate the literature on political opportunity structures and the multi-level framework of the sustainability transitions literature.*

Paper 2 due June 21 (25%). Prepare a policy brief for your minister that provides analysis and recommendations for a critical clean energy policy choice facing your jurisdiction. You are required to get instructor approval for your choice of policy by June 1. Specific brief format to provided later. Maximum 1250 words.

Discussion questions (10%) – students will have to respond in writing to several of the discussion questions (provided by Friday noon the week before to students) for 10 of 12 classes.

Synchronous class participation (10%) - Class participation will be assessed on the basis of quantity and, especially, quality of participation. Attendance is expected, and absences will affect the participation grade. Students are expected to do the assigned readings before coming into class, and be prepared to discuss them in a critical fashion. **Students who are less comfortable speaking in class should see the professor about ways to create more comfort or explore alternatives modes of participation**. A rubric for assessing class participation is included below.

Participation Marking Rubric

Note: For the Summer 2021 online class, written comments, canvas discussions, and questions in the chat function will be considered active class participation. But there will still be some premium to verbal discussion as well.

90+ actively participation with critical and/or synthetic perspective on readings; identifies and helps facilitate connections between readings and themes through the course. Always respectful, constructive, and collaborative.

85-89 active participation demonstrating clear knowledge of the readings and ability to relate the readings to broader course themes. Always respectful, constructive, and collaborative.

80-84 active participation demonstrating clear knowledge of the readings. Generally respectful, constructive, and collaborative.

75-79 occasional participation, demonstrating some knowledge of the readings. Usually respectful, constructive, and collaborative.

70-74 limited participation demonstrating some knowledge of the readings. May at times not be respectful, constructive, and collaborative.

<70 little or no participation, unjustified gaps in attendance and/or lateness. May be disruptive or undermine class dynamics.

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General UBC Course Rules

UBC Statement on Respectful Environment for Students, Faculty and Staff
The University of British Columbia envisions a climate in which students, faculty and staff are provided with the best possible conditions for learning, researching and working, including an environment that is dedicated to excellence, equity and mutual respect. The University of British Columbia strives to realize this vision by establishing employment and educational practices that respect the dignity of individuals and make it possible for everyone to live, work, and study in a positive and supportive environment, free from harmful behaviours such as bullying and harassment.

University Policies
UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions.
Details of the policies and how to access support are available on the UBC Senate website.

Special Statement from the Provost regarding online learning for international students

During this pandemic, the shift to online learning has greatly altered teaching and studying at UBC, including changes to health and safety considerations. Keep in mind that some UBC courses might cover topics that are censored or considered illegal by non-Canadian governments. This may include, but is not limited to, human rights, representative government, defamation, obscenity, gender or sexuality, and historical or current geopolitical controversies. If you are a student living abroad, you will be subject to the laws of your local jurisdiction, and your local authorities might limit your access to course material or take punitive action against you. UBC is strongly committed to academic freedom, but has no control over foreign authorities (please visit http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,33,86,0 for an articulation of the values of the University conveyed in the Senate Statement on Academic Freedom). Thus, we recognize that students will have legitimate reason to exercise caution in studying certain subjects. If you have concerns regarding your personal situation, consider postponing taking a course with manifest risks, until you are back on campus or reach out to your academic advisor to find substitute courses. For further information and support, please visit: http://academic.ubc.ca/support-resources/freedom-expression

Academic Integrity

The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply when the matter is referred to the Office of the Dean. Careful records are kept in order to monitor and prevent recurrences. A more detailed description of academic integrity, including the University's policies and procedures, may be found in the UBC Calendar: Student Conduct and Discipline.

Academic Accommodation for Student with Disabilities

Academic accommodations help students with a disability or ongoing medical condition overcome challenges that may affect their academic success. Students requiring academic accommodations must register with the Centre for Accessibility. They will determine the student's eligibility for accommodations in accordance with Policy 73: Academic Accommodation for Students with Disabilities. Academic accommodations are not determined by your instructors, and instructors should not ask you about the nature of your disability or ongoing medical condition, or request copies of your disability documentation. However, your instructor may consult with the Centre for Accessibility should the accommodations affect the essential learning outcomes of a course.