

PPD 400: Topics in Public Policy and Urban Studies
Global Climate Change
Spring Semester, 2018

Mon/Weds 2:00 – 3:50
Room VPD 112

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Introduction

Climate change is one of the most challenging public policy, urban planning, and social science issues of our time. Few issues have generated as much controversy, or require as much communication across disparate fields. Many of you (likely all of you) will come to this class with a pre-conception about the nature of climate change as a policy problem and possible solutions. This course will build on the skills that you have learned to assess approaches to a real-world problem. The course objective is to provide a framework for you to apply your past learning and to give you an opportunity for in-depth learning about a specific issue.

Your Professor

I have advised California state agencies on approaches to climate change policy, and I regularly communicate with officials at the state's Air Resources Board (the lead agency for implementing California's greenhouse gas emission reduction policies) and Strategic Growth Council (a coordinating body of members of the Governor's cabinet.) I have also advised the World Bank on transportation and air quality. I look forward to working with you to build your networks into the professional community of policy makers and urban planners. Feel free to reach out to me for advice on your career and education.

Learning Objectives

In this course, you will learn how to:

- Apply and integrate your core coursework in public administration, policy analysis, economics, statistics, planning, and urbanism. (Note: There are no prerequisites for this course. I expect that students have some background in these topics, but more important is interest and willingness to learn.)
- Understand and critically evaluate some of the key debates in climate change policy, including:
 - o the nature of the science and its relationship to policy,
 - o uncertainty and whether or how uncertainty relates to doubt,
 - o the distinction between mitigation and adaptation in climate policy, and whether there is tension or complementarity between those two,
 - o how to assess the value of waiting for more information,

- market- based approaches to climate change policy,
- equity issues in climate change,
- climate regulation and economic growth;
- Coordinate your work in groups while delivering your individual component of the group work.

Group Project and Related Individual Paper

This class will have a large role for active learning. You will divide into teams, of four to five persons, and develop a research project that will include both individual and group work. Each team will have persons who will choose from among the following:

- Background
- Evidence
- Mitigation versus Adaptation
- Equity / Social Justice
- Economic Growth
- Other individual elements, which might be sectoral (transportation, power generation, etc.)

With four person teams, not every topic will be covered, and if a team member brings a sectoral focus the same will be true with five person teams. Not every topic must be covered in the team, but each person in the team will have a distinct role. Your work will proceed as follows:

1. Write an individual paper, maximum 8 pages, double spaced, which summarizes your own contribution. The paper will be delivered in two stages:
 - a. First draft, fully polished with references, proofread, and in final form (it should be a very polished draft, suitable for grading as if it was the final paper), delivered on March 5.
 - b. Revised draft, responding to instructor comments, delivered on April 11.
2. Participate fully in the development of your team's research and presentation of the topic. This will require team meetings, which your team must schedule and convene, throughout the semester. The product for the team research will be a presentation of 20 minutes summarizing the background and a policy/planning proposal during the last two weeks of classes. Each team member should speak during this presentation, and visuals and background materials should be coherently presented.

Topics for teams will be:

1. China's approach to climate change policy, and lessons learned for China and/or other countries
2. The European Union's approach to climate change policy, and lessons learned for the EU and/or other countries
3. Climate change and environmental justice in California
4. Electric and driverless vehicles and the impact on climate change policy

5. Climate change impacts and adaptation in vulnerable locations, including island nations, low-lying, and poverty regions (with a focus on specific locations)
6. Climate adaptation in California
7. Markets versus regulation in climate change policy
8. California high speed rail as a climate change policy – pros, cons, and a critical assessment
9. Goods movement and freight transport and climate policy – using the example of the Ports of Los Angeles and Long Beach

Teams can choose other topics with instructor approval.

Each team will meet with the instructor for two advising meetings, and at the first meeting teams should bring:

1. A short written outline of each team member's proposed individual paper, with thesis statement and brief outline of ideas, totaling one page per team member.
2. A description of the team's suggested topical focus and anticipated area of recommendations for the overall team presentation.

Other Assignments

1. Short paper on one of these questions, of the student's choosing:
 - a. How extreme will climate change impacts be? Very? Not so much?
 - b. How should policy handle the uncertainties associated with climate change?
 - c. What is the appropriate role of climate mitigation policies versus adaptation policies?
 - d. Is there a tension between economic growth and reducing greenhouse gas emissions? If there is, how should policy manage that tension?

Each paper will be two pages, double spaced, maximum. The paper will start with your answer to the question in a sentence (i.e. for "a", your answer could be extreme, or not so much, for "b" you will say how policy should handle uncertainties, etc.) and then the rest of the paper lays out your argument in a clear, logical, fact-based method.

2. Two and a half minute presentation of your short paper from "1" to the class. Students will be randomly assigned to class days, approximately four per day (except on one day when we may have ten), to present their argument to the class. Presentations will follow the flow of the paper. First, present your conclusion (i.e. for "d", state how much tension you see between economic growth and GHG reduction), and then justify your conclusion. You will have two and a half minutes **maximum**, so you must be rehearsed and concise. Following those presentations, we will have class discussion briefly on the topic, so know that your presentation will prompt discussion. I recommend against visual aids for this, although the two primers below suggest powerpoint. (Whether to use powerpoint is up to you, but I think you can be effective without powerpoint. Remember you only get two and a half minutes.) Here is a short primer on these "lightning talks" and how to approach them: <https://barriebyron.wordpress.com/2013/02/17/so-you-want-to-give-a->

[lightning-talk/](https://barriebyron.wordpress.com/2013/02/17/so-you-want-to-give-a-lightning-talk/). And another primer: <https://barriebyron.wordpress.com/2013/02/17/so-you-want-to-give-a-lightning-talk/>

3. Individual paper draft, described above in the group work section.
4. Revised individual paper, with a short statement of responses to instructor comments.
5. Group presentation.
6. Mid-Term exam (in class)
7. Final exam (on the assigned date for the final)

Grading will be apportioned as follows

Assignment	Share of course grade	Due date
Short essay, 2 pages maximum	10%	Jan. 24
Presentation of short essay in class, two and a half minutes (lightning talk)	5%	As assigned, beginning after short essay is due
Draft individual paper, 8 pages maximum	20%	March 5, bring hard copy to class (in addition to turning in electronically via Blackboard)
Mid-term exam	20%	March 19, in class
Revised individual paper, also 8 pages (can be up to 10 pages if space is needed to address comments) with short statement (usually 1 page) of response to comments	10%	April 11
Group presentation	15%	April 18, 23, and 25
Final exam	20%	May 7 (Monday), 2 p.m.

Textbooks and Readings

Readings are available on Blackboard except for these, which you need to purchase:

Naomi Oreskes and Erik M. Conway, *Merchants of Doubt*, Bloomsbury Press, New York, 2010, Chapters 1 “Doubt is our Product” and Chapter 6 “The Denial of Global Warming” Available for purchase, Amazon Kindle edition is \$9.99. Not in the bookstore – buy online.

Matthew Kahn, *Climatopolis: How Our Cities Will Thrive in the Hotter Future*, Basic Books, 2013, chapter 8, “Seize the Day: Opportunities for Our Hotter Future.” Amazon Kindle edition is \$11.99. Not in bookstore – buy online.

Readings and Schedule (readings available on Blackboard unless otherwise noted)

Week 1: Introduction

Jan. 8

Introduction, get preferences on groups and topics
As time allows, assign short essay “lightning talk” dates

Jan. 10

An introduction to global warming / climate change

“The science of climate change: The clouds of unknowing” *The Economist*:
<http://www.economist.com/node/15719298> March 18, 2010

“The science of climate change: What is known about global warming—and what remains dark” *The Economist*, Nov. 26, 2015 <https://www.economist.com/news/special-report/21678953-what-known-about-global-warmingand-what-remains-dark-supermodels>

Week 2: Impacts

Jan. 15, Martin Luther King holiday, no class

Jan. 17, Impacts, and views of communicating impacts

David Wallace-Wells, “The Uninhabitable Earth,” *The New Yorker*, July 9, 2017,
<http://nymag.com/daily/intelligencer/2017/07/climate-change-earth-too-hot-for-humans.html>

Disaster Porn: Pushing Back on that frightful *New Yorker* magazine piece on climate change, PLOS Blogs, <http://blogs.plos.org/onscienceblogs/2017/07/14/disaster-porn-pushing-back-on-that-frightful-new-york-magazine-piece-on-climate-change/> July 14, 2017

Michael Mann, Susan Joy Hassol, Tom Toles, “Doomsday Scenarios are as Harmful as Climate Change Denial,” *New York Times*,
https://www.washingtonpost.com/opinions/doomsday-scenarios-are-as-harmful-as-climate-change-denial/2017/07/12/880ed002-6714-11e7-a1d7-9a32c91c6f40_story.html?utm_term=.f80082059c78

Bret Stephens, “Climate of Certainty,” New York Times, April 28, 2017,
https://www.nytimes.com/2017/04/28/opinion/climate-of-complete-certainty.html?_r=0

Week 3: What is doubt? What is not? How does uncertainty figure in? Plus ...
Introduction to externalities

Jan. 22

Doubt, Uncertainty

Naomi Oreskes and Erik M. Conway, Merchants of Doubt, Bloomsbury Press, New York, 2010, Introduction (pp. 1-9) and chapters 1 “Doubt is our Product” (pp. 10-35) and Chapter 6 “The Denial of Global Warming” (pp. 169-215)
Available for purchase, Amazon Kindle edition is \$9.99. You need to buy this – not on Blackboard.

Jan. 24 – Introduction to the Economics of Externalities, (Assignment Due: 2-page essay)

Harvey Rosen and Ted Gayer, Public Finance, 8th edition, McGraw-Hill, “Externalities,” pp. 71-103.

Week 4: How to regulate GHG emissions – a view from economics. Part 1, The Economics of Externalities

Jan. 29 – First group of lightning talks

Harvey Rosen and Ted Gayer, Public Finance, 8th edition, McGraw-Hill, “Externalities,” pp. 71-103.

Jan. 31 – More lightning talks (possibly as many as 10 in this class), continue economics of externalities

Week 5: Carbon Tax, Tradeable Permits, or Cap and Dividend

Feb. 5 and Feb. 7

Continue in-class presentations of lightning talks

Tax Carbon and Rebate the Money? That could be expensive. Bloomberg news, Aug. 8, 2014, with summaries of research (and links) by Resources for the Future,
<https://www.bloomberg.com/news/articles/2014-08-08/carbon-taxes-giving-rebates-to-everyone-would-cost-the-most>

Yes on I-732 (summary in favor of Washington State initiative for a refundable carbon tax), available at <https://yeson732.org/>

California Cap and Trade, Center for Climate and Energy Solutions,
<https://www.c2es.org/content/california-cap-and-trade/>

Week 6: Advising by groups

Feb. 12 and 14 – Student groups (teams) will meet, 30 minutes each, with the professor during class time, in the classroom, for advising on individual papers and team projects.

Week 7: Mitigation and Adaptation

Feb. 19, Presidents' Day holiday, no class

Feb. 21

Continue lightning talks

Matthew Kahn, *Climatopolis: How Our Cities Will Thrive in the Hotter Future*, Basic Books, 2013, chapter 8, "Seize the Day: Opportunities for Our Hotter Future."

Paul Drummund, *Mitigation versus Adaptation: Which Path to Follow Under Uncertainty?* 2015, UCL Lancet Commission (University College London)
<https://blogs.ucl.ac.uk/lancet-commission/2015/06/23/mitigation-vs-adaptation-which-path-to-follow-under-uncertainty/>

Week 8: Economic Growth and GHG Reduction

Feb. 26 and Feb. 28, continue lightning talks

Nicholas Bianco, Kristin Meek, Rebecca Gasper, Michael Obeiter, Sarah Forbes, & Nate Aden. *Seeing is Believing: Creating a New Climate Economy in the United States*. World Resources Institute. 2014.

http://www.wri.org/sites/default/files/seeingisbelieving_standalone_summary.pdf

Congressional Budget Office. *The Economic Effects of Legislation to Reduce Greenhouse-Gas Emissions*. 2009.

<https://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/105xx/doc10573/09-17-greenhouse-gas.pdf> Read pp. 1-9.

Optional: Dan Wei and Adam Rose. *Macroeconomic Impacts of the California Global Warming Solutions Act on the Southern California Economy*. *Economics of Energy and Environmental Policy*, 2014, pp. 101-118.

Optional: Ann Ferris, Richard Garbaccio, Alex Marten and Ann Wolverton, The Impacts of Environmental Regulation on the U.S. Economy, U.S. Environmental Protection Agency National Center for Environmental Economics, working paper 17-01, July, 2017, <https://www.epa.gov/sites/production/files/2017-08/documents/2017-01.pdf>

Week 9: Catch-up

March 5 – catch up day (if we are moving more slowly than the syllabus suggests) – we will have class today no matter what! – and continue lightning talks as needed – *your individual papers are due today, bring a hard copy to class in addition to submitting via Blackboard*

March 7 – Guest lecturer, TBA

Week 10: Mid-Term Exam and Environmental Justice

March 19 – In-class Mid-Term Exam

March 21 – Environmental Justice

Brentin Mock. The Racial Justice Flaws in California’s Climate Bill, Citylab, Sept. 15, 2016, <https://www.citylab.com/equity/2016/09/californias-climate-bill-is-not-protecting-the-health-of-black-and-latino-communities/500024/>

Lara J. Cushing, Madeline Wander, Rachel Morello-Frosch, Manuel Pastor, Allen Zhu, James Sadd, A Preliminary Environmental Equity Assessment Of California’s Cap-And-Trade Program, USC Program for Environmental and Regional Equity, 2016, http://dornsife.usc.edu/assets/sites/242/docs/Climate_Equity_Brief_CA_Cap_and_Trade_Sept2016_FINAL2.pdf

Week 11: Advising by groups

March 26 and March 28 – Student groups (teams) will meet, 30 minutes each, with the professor during class time, in the classroom, for advising on individual papers and team projects.

Week 12: The Transportation Sector

April 2 – catch-up if needed, or continuation of environmental justice

April 4 – Introduction to GHG emissions by sector

California Air Resources Board, California’s 2017 Climate Change Scoping Plan, https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf, “Key Sectors,” pp. 62-95.

Week 13: The Transportation Sector

April 9 and April 11 – Note: Revised Individual Papers due April 11

Marlon Boarnet and Susan Handy, “A Framework for Projecting the Potential Statewide Vehicle Miles Traveled (VMT) Reduction from State-Level Strategies in California” white paper of the National Center for Sustainable Transportation, 2017, https://ncst.ucdavis.edu/wp-content/uploads/2017/03/State-Level-VMT-Strategies-White-Paper_FINAL-03.2017.pdf

Optional: Deborah Salon, Marlon Boarnet, Susan Handy, Steven Spears, and Gil Tal. How do local actions affect VMT? A critical review of the empirical evidence, Transportation Research Part D, 2012.

Week 14: Technology and Transportation and begin presentation of final projects

April 16 – Driverless Cars

“Are we going too fast on driverless cars?” Science, Dec. 14, 2017. <http://www.sciencemag.org/news/2017/12/are-we-going-too-fast-driverless-cars>

Erick Guerra, When Autonomous Cars Take to the Road, *Planning*, The American Planning Association, May, 2015, <https://www.planning.org/planning/2015/may/autonomouscars.htm>.

April 18 – Presentation of Group projects, in class

Week 15: Continue Group Presentations

April 23 and April 25

Continue in-class presentation of group projects.
(Note: Class on April 23 may be cancelled. More information on this closer to April 23.)

Final Exam: May 7 (Monday), 2 p.m.