

CLIMATE CHANGE AND THE LAW

Syllabus

Fall 2017

Professor Parenteau

We are the first generation to feel the impact of climate change and the last generation that can do something about it.

Jay Inslee, Governor of Washington

Course Description Climate change -- more accurately, climate disruption-- is well underway. The polar ice caps and glaciers are melting; sea levels are rising; oceans are acidifying; extreme weather events are increasing; catastrophic wildfires are becoming routine; heat waves and droughts are intensifying; pests and diseases are spreading; ecosystems are changing; extinction rates are accelerating; and the number of climate refugees is steadily rising. According to the world's leading scientists these effects are largely being caused by humans through global emissions of greenhouse gases such as carbon dioxide, methane and nitrous oxide, magnified by substances such as black carbon and ozone depleting chemicals, as well as by positive feedback loops like the loss of albedo in the Arctic, the drying of the Amazon, and methane release from melting permafrost. Concentrations of CO₂ in the atmosphere are the highest they have been in millions of years, and are increasing by 3- 5% per year. Average global temperatures are the highest in over 10,000 years of human history and could rise by 6-8° Celsius (C) by 2100 under business as usual (BAU). These changes in the earth's climate system are essentially irreversible because carbon stays in the atmosphere for centuries.

In sum, rapid de-carbonization of the global economy is a scientific, economic and moral imperative.

Learning Objectives: After this course you should be able to:

- Describe the risks and potential consequences of anthropogenic climate change
- Explain the relationship of sources and sinks of carbon
- Weigh the costs and benefits of climate mitigation
- Critique alternative carbon pricing strategies like emissions trading and carbon taxes
- Evaluate traditional regulatory approaches under the Clean Air Act and other laws.
- Assess potential judicial remedies to force stronger government and private action to mitigate climate change and compensate victims.
- Compare the international mechanisms for addressing climate change such as the Paris Agreement, and the Montreal Protocol.
- Describe local, state and regional approaches to reducing carbon pollution.

- Evaluate options for reducing emissions from different sectors--electricity, transportation, housing, forestry, food supply.
- Compare pros and cons of various energy technologies.

Course Materials: There is no required text. All assigned readings and other materials are available on TWEN. However there are three books I would recommend for those wishing to delve deeper into the issues: **Global Climate Change and the Law, 2d ed.** Edited by Michael Gerrard, ABA (2014); **Wold, Hunter & Powers Climate Change and the Law, 2d ed.** Lexis Nexis (2014); and **Drawdown: the Most Comprehensive Plan Ever Proposed to Reverse Global Warming**, edited by Paul Hawken (2017).

Guest Speakers: Guests will provide additional perspectives.

Products:

1. Three blog posts (500 word limit for each) on a topic taken from the Syllabus (e.g. ocean acidification, black carbon mitigation, climate economics). Post the comments in the **Blog Forum** on TWEN. First comment due **September 29**. Second due **October 27**. Third due **November 30**. See the links on the Climate Blogs on TWEN for examples.
2. As a final product, write a **5000 word** “white paper” that recommends a climate mitigation or adaptation strategy. Papers must be posted on TWEN by **5 PM December 22**. Sample papers from prior courses are posted on TWEN. A **Grading Rubric** will also be posted on TWEN.

Grading: Each blog post is worth 100 points. The white paper is worth 700 points. Final grade based on a total of 1000 points.

Office Hours: By appointment. My office is in Eaton House, Room 201 (ext1305).

Tentative Class Schedule and Readings

Aug 29 Welcome to the Anthropocene

Read: The Uninhabitable Earth: <http://nymag.com/daily/intelligencer/2017/07/climate-change-earth-too-hot-for-humans.html>

Discussion Questions

Could things really get this bad?

Why paint such a bleak picture?

Who is the audience?

Is fear a motivator?

Is optimism justified?

Watch: Question Power <https://www.youtube.com/watch?v=dr-3AzFevIE>

Aug 31 *Years of Living Dangerously* Season One Episode 4 (shown in class)

Discussion Questions:

What is happening to Greenland?

Why is America so polarized on the climate issue? See Kahan, *Why we are polls apart on Climate* (posted on TWEN)

What is confirmation bias?

See http://www.princeton.edu/~achaney/tmve/wiki100k/docs/Confirmation_bias.html

What is the best way to communicate the science of climate change?

See <http://environment.yale.edu/climate-communication/article/how-to-communicate-the-scientific-consensus-on-climate-change/>

Humor by John Oliver: <https://www.youtube.com/watch?v=cjuGCJJUGsg>

Sept 5 YOLD Episode 2 (shown in class)

Discussion Questions

What is the relationship between climate change and the increased risks and devastation of catastrophic wildfires? See <http://www.theatlantic.com/photo/2015/08/western-wildfires-have-burned-more-than-7-million-acres-this-year/401666/>

What role does climate change play in the pine bark beetle infestations have destroyed over 4 million acres of National Forests? See <http://www.fs.usda.gov/barkbeetle>

Does the US have the moral authority to scold Indonesia for not conserving its forests?

Sept 7 Ocean Acidification

Acid test: <http://www.youtube.com/watch?v=5cqCvcX7buo>

Kolbert, *The Darkening Sea*

Ten ways States can address ocean acidification (pp. 72-

99) <http://www3.law.harvard.edu/journals/elr/2013/05/14/ten-ways-states-can-combat-ocean-acidification-and-why-they-should/>

CBD v EPA (Clean Water Act)

Sept 12 The Montreal Protocol

EPA Montreal Protocol FAQs

Lessons for the Climate: <http://blogs.worldbank.org/climatechange/lessons-montreal-protocol-climate-finance>

Court Strikes down HFC Rules <https://insideclimatenews.org/news/09082017/hfcs-greenhouse-gas-court-ruling-refrigeration-coolant-epa-authority-regulate-kigali>

Sept 14 The Paris Agreement and Beyond

Text of the Agreement

Reader's Guide: <https://www.theatlantic.com/science/archive/2015/12/a-readers-guide-to-the-paris-agreement/420345/>

Trump May Not Be Able to Exit the Agreement: <https://lawfareblog.com/while-trump-pledges-withdrawal-paris-agreement-climate-international-law-may-provide-safety-net>

US Climate Alliance <https://www.usclimatealliance.org/>

Sept 19 Social Cost of Carbon

How SCC is used: <http://www.yaleclimateconnections.org/2015/02/understanding-the-social-cost-of-carbon-and-connecting-it-to-our-lives/>

EPA methodology: <http://www.epa.gov/climatechange/EPAactivities/economics/scc.html>

Trump doesn't like it: <http://www.sciencemag.org/news/2017/06/despite-trump-executive-order-social-cost-carbon-still-studied-federal-agency>

States are still using it: <https://insideclimatenews.org/news/11082017/states-climate-change-policy-calculate-social-cost-carbon>

Courts have upheld it: *Zero Zone v Dep't. of Energy* (pp 5-10; 35-45)

Sept 21 Financial Risks and Stranded Assets

Risky Business: <http://riskybusiness.org/report/overview/executive-summary>

Carbon Tracker, *Unburnable Carbon*

Carbon Risk Initiative (CERES): <http://www.ceres.org/files/investor-files/car-factsheet>

Exxon, Stranded Assets and the New Math: <http://www.greenbiz.com/blog/2014/03/24/exxon-stranded-assets-and-new-math>

Sept 26 Emissions Trading

Putting a price on Carbon: <http://www.nytimes.com/2014/05/30/science/a-price-tag-on-carbon-as-a-climate-rescue-plan.html>

McCallister, *The Overallocation Problem*

Driesen, *Does Emission Trading Encourage Innovation?*

EU Emissions Trading System: http://ec.europa.eu/clima/policies/ets/index_en.htm

Sept 28 California Model (CARB)

How it works: <https://www.c2es.org/us-states-regions/key-legislation/california-cap-trade>

Program reauthorized/modified: <http://www.latimes.com/politics/la-pol-ca-cap-trade-california-climate-change-program-explained-20170719-htmstory.html>

Another View: http://www.salon.com/2017/08/05/california-votes-to-extend-landmark-cap-and-trade-program-while-allowing-big-polluters-to-get-away-with-murder_partner/

Oct 3 Carbon Taxes

Guest Speaker Professor Janet Milne

Oct 5 The Regional Greenhouse Initiative (RGGI)

Guest Speaker David Farnsworth Regulatory Assistance Project

Oct 10 **Fall Break No Class**

Oct 12 The Courts and Climate Change: Standing

Mass v EPA (Part IV)

Washington Environmental Council v Bellon

Wild Earth Guardians v Jewell

Oct 17 The Courts and Climate Change: Common Law Claims

AEP v Connecticut

Village of Kivalina v Exxon

County of San Mateo v Exxon <http://blogs.law.columbia.edu/climatechange/2017/07/18/local-governments-in-california-file-common-law-claims-against-largest-fossil-fuel-companies/>

Oct 19 The Courts and Climate Change: The Atmospheric Trust Litigation

Alec L v Jackson and Alec L v McCarthy

Juliana v United States

Oct 24 The Courts and Climate: NEPA

Mid States Coalition v Surface Transportation Board

CBD v NHTSA

High Country Conservation Advocates v US Forest Service

Oct 26 **NO CLASS.** Take Home Assignment

Oct 31 The Courts and Climate Change: Int'l Law

A Climate Change Litigation Precedent: *Urgenda Foundation v The State of the*

Netherlands <https://www.cigionline.org/publications/climate-change-litigation-precedent-urgenda-foundation-v-state-netherlands>

Ashgar Leghari v. Federation of Pakistan (E Law Digest)

Climate Litigation Database: <http://climatecasechart.com/non-us-climate-change-litigation/>

Nov 2 **NO CLASS** Work on Paper Outline

Nov 7 *The Clean Air Act*

Endangerment Finding

Mass v EPA Part V

Mobile Sources: <https://www.epa.gov/regulations-emissions-vehicles-and-engines>

Trump Rollbacks <https://www.nytimes.com/2017/03/03/us/politics/trump-vehicle-emissions-regulation.html>

California Waiver <https://www.epa.gov/state-and-local-transportation/vehicle-emissions-california-waivers-and-authorizations>

Nov 9 Carbon Rules for New Powerplants

UARG v EPA

Section 111(b): <https://www.law.cornell.edu/uscode/text/42/7411>

EPA Standards for New, Modified and Reconstructed Power

Plants: <http://www.epa.gov/airquality/cpp/fs-cps-overview.pdf>

Court Stays Litigation: <http://www.utilitydive.com/news/challenge-to-carbon-rules-for-new-power-plants-delayed-indefinitely/449163/>

Nov 14 The Clean Power Plan (RIP)

Section 111(d): <http://www.gpo.gov/fdsys/pkg/USCODE-2010-title42/pdf/USCODE-2010-title42-chap85-subchapI-partA-sec7411.pdf>

Trump Dismantling; <https://www.nytimes.com/2017/03/27/science/what-to-know-about-trumps-order-to-dismantle-the-clean-power-plan.html>

Court Suspends

Litigation: <https://www.eenews.net/greenwire/2017/04/28/stories/1060053774>

US Still on Track to Achieve 2020 Targets: <https://www.scientificamerican.com/article/us-may-come-close-to-2020-greenhouse-gas-emission-target/>

Nov 16 Resistance Movement

Climate deregulation tracker: http://columbiaclimatelaw.com/climate-deregulation-tracker/president-issues-executive-order-to-expedite-infrastructure-reviews-revoke-flood-management-standard/?mc_cid=8c2151318e&mc_eid=707bb05d1a

Nat Geo <http://news.nationalgeographic.com/2017/03/how-trump-is-changing-science-environment/>

Democratic AG

response <http://www.nationallawjournal.com/id=1202793485098/Democratic-AGs-Unite-to-Counter-Regulatory-Rollbacks-Pushed-by-Trump-Congress-and-Industry?slreturn=20170720131327>

Nov 21 Beyond Coal: The Clean Energy Revolution

Standard & Poor, *Window for Coal is closing*

Can Coal Country Thrive in a Clean Energy

Economy? <http://www.eesi.org/briefings/view/040516coal>

Mark Jacobson, A Path to Sustainable

Energy: <http://web.stanford.edu/group/efmh/jacobson/Articles/I/sad1109Jaco5p.indd.pdf>

Critique: <http://www.utilitydive.com/news/whats-missing-from-the-100-renewable-energy-debate/447658/>

Wind and Solar

Boom: <https://www.bing.com/videos/search?q=the+solar+boom&&view=detail&mid=9ED511C19A22D0DF56519ED511C19A22D0DF5651&FORM=VRDGAR>

Net Metering

Explained <https://www.bing.com/videos/search?q=Net+Metering+Explained&&view=detail&mid=DC20BD7BBC79745D7CFBDC20BD7BBC79745D7CFB&FORM=VRDGAR>

Nov 23 Thanksgiving No Class

Nov 28 Are Nukes the Answer?

Peter Bradford, *Honey, I Shrunk the Renaissance: Nuclear Revival, Climate Change, and Reality*

Stuart Brand *Why Environmentalists Must Accept Nuclear*

Power: <https://www.youtube.com/watch?v=-RKkkcL61Cc>

Westinghouse Bankruptcy <https://www.nytimes.com/2017/03/29/business/westinghouse-toshiba-nuclear-bankruptcy.html>

South Carolina Pulls the Plug on New Nukes: <http://www.sierraclub.org/sierra/south-carolina-pulls-plug-new-nukes>

Nov 30 Is Natural Gas a Bridge or a Plank?

Parenteau & Barnes, *A Bridge Too Far: Building off Ramps on the Shale gas Superhighway*

Michael Levi *Fracking and the Climate Debate*: <http://www.democracyjournal.org/37/fracking-and-the-climate-debate.php?page=all>

EPA methane Rule: <https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry/new-source-performance-standards-and>

Court Blocks Attempt to Freeze Methane

Rule: <https://www.nytimes.com/2017/07/03/climate/court-blocks-epa-effort-to-suspend-obama-era-methane-rule.html>

Dec 5 Drawdown

Overview <http://www.drawdown.org/>

Solutions: <http://www.drawdown.org/solutions-summary-by-rank>

David Roberts Commentary <https://www.vox.com/energy-and-environment/2017/5/10/15589038/top-100-solutions-climate-change-ranked>

Dec 7 Negative Emissions

Description <https://www.carbonbrief.org/explainer-10-ways-negative-emissions-could-slow-climate-change>

Risk Benefit: <http://www.nature.com/news/emissions-reduction-scrutinize-co2-removal-methods-1.19318>

Stockholm Institute [https://www.sei-](https://www.sei-international.org/mediamanager/documents/Publications/Climate/SEI-WP-2016-08-Negative-emissions.pdf)

[international.org/mediamanager/documents/Publications/Climate/SEI-WP-2016-08-Negative-emissions.pdf](https://www.sei-international.org/mediamanager/documents/Publications/Climate/SEI-WP-2016-08-Negative-emissions.pdf)(optional)

Geo-Engineering Governance (on TWEN)