

Climate Change Policy

Spring 2018 - 11:374:426:01

Professor: Cymie R. Payne

Cook Office Building, Room 208

55 Dudley Road

New Brunswick, NJ

Cymie.Payne@Rutgers.edu

Time and Place Tuesday, 10:55 pm to 1:50 pm, Blake

Office Hours by appointment. Please schedule by email.

Required Course Book: Bill McKibben (ed.), *The Global Warming Reader* (2011 Penguin). Additional readings will be posted on Sakai or will be available on the internet.

Course Description

Climate policy includes a wide range of measures aimed at providing tolerable climate conditions for life on earth as we know it. It raises classic issues of distributional justice, law and science, risk, uncertainty and precaution, technology policy, energy regulation and international relations. Students will leave this course with a basic understanding of the sources and impacts of climate change and the key state, national and international policies for addressing it.

Learning objectives

You will understand key definitions, concepts, histories and theories for domestic and transnational governance strategies for reducing climate disruption (mitigation) and adapting to unavoidable climate disruptions. You will develop your ability to analyze a policy problem and develop policy recommendations. You will develop your research, analytical, writing and presentation skills.

The EPIB learning objectives that are particularly addressed by this class are:

1.1 Describe major patterns and drivers of natural resource use, pollution, and climate and environmental change.

1.2 Identify different approaches to the governance and management of human activities that affect the environment, both in the US and abroad, including institutions, property relations, management regimes, politics, and policies

2- Students will acquire the skills to use appropriate conceptual and methodological tools to structure inquiries about human-environment interactions

3-Students will undertake their work guided by ethical considerations. They will identify their own values with respect to environmental, health, and food issues. They will evaluate and address the ethical dimensions and implications of related problems, assessments, plans, and communication, including their differentiated social impacts.

Basis for Evaluation

This course emphasizes your reading skills, discussion skills, and writing skills. This is an upper level seminar, so there will be a fairly intense amount of reading and writing spread throughout the semester.

Because we only meet once a week, each class session is equivalent to two regular period classes. The expected time for preparing for class and completing assignments is a total of 6 hours per week outside of class time. Please budget your time for homework that you can devote the necessary time to staying up to date with the readings. You are expected to do all of the required readings for the assigned dates and to be prepared to discuss them in class.

Evaluation is based on:

- Attendance/Participation/Leading Discussion 15 points - All semester
- Reading summaries of key concepts (6 total) 30 points - Due each week by class
- Take home assignments (2) 30 points - Announced in class
- Final Exam 25 points

Attendance/Participation/Leading Discussion

Leading Discussion:

You will be responsible for leading the class through *one* of the assigned readings. This is not a standard presentation: I don't expect you to present your own thoughts on the reading, or even to talk very much. Rather, I would like you to facilitate discussion for ten to fifteen minutes. Your responsibility is to read the text very carefully and to prepare a number of questions about it. Your goal is for your classmates to understand the argumentative strategy employed in the text as well as possible, and to start debating how persuasive they find it.

Reading Summaries and Take Home Assignments:

Written assignments are to be turned in via Sakai **by 10:00 am** before the beginning of classes in which they are due or by the deadline specified in the assignment. Reading summaries will NOT be accepted after the class they are due; there are no exceptions. Late take home assignments will be penalized 5 points per 24 hours late. Your name must always be on the paper. Papers should be proofed carefully, and please pay attention to readability and writing style, as well as to content.

Reading summaries:

You will bring to class a brief (1-2 paragraph) summary of the readings for the day that highlights the key concepts, definitions, and theories discussed in the readings, starting with Week 2 (this is for you, so it can be either digital or hard copy – as stated above, you must submit it via Sakai by 10 am before the class). You will also write 2 questions for discussion based on the readings. These are graded pass/fail. You will need to do this 6 times throughout the semester (total 30 points possible).

Take home assignments:

We will have two take home assignments throughout the semester which will require you to take a policy issue from class and write a briefing on it. Deadlines and content will be discussed in class.

Academic Integrity:

I expect Rutgers students to behave with integrity. You can find a description of Rutgers academic integrity policy here: <http://academicintegrity.rutgers.edu/>. Please read it carefully. Plagiarism is, in fact, the theft of someone else's ideas and words with the dishonest claim that they are yours. Infractions will be referred to the appropriate dean with the recommendation of the harshest sanction allowed, which may include expulsion. When in doubt, quote and drop a footnote reference to the source.

Disability Services

If you are entitled to a disability accommodation, I encourage you to request it. Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

Syllabus

topics and readings subject to change based on class preferences, availability of guest speakers, and current policy developments

Class	Date	Topic
1	Jan 16	<p>Course Overview: The Policies of Climate Change</p> <p>The Mechanism of Climate Change</p> <p>What Is Policy</p> <p>Objectives:</p> <ul style="list-style-type: none">• Discuss what this class will cover, the questions we will ask, a basic framework for making policy• Learn the mechanism of climate change <p>Discussion questions:</p> <p>When the IPCC scientists say “climate change” what do they mean? Identify three ways the climate is changing.</p> <p>What is the basic mechanism of climate change? Identify three climate drivers.</p> <p>Identify an example of a GHG source and an example of a GHG sink.</p> <p>Identify three pieces of evidence that climate is changing.</p> <p>In studying the science, what information is the result of direct observations? What is based on models? What are areas of uncertainty – these are the areas where policies will need to adapt as we learn more, or as some options are foreclosed and others open.</p> <p><i>Reading for class:</i></p> <p>Course Overview</p> <p>Syllabus</p> <p>Policy</p> <p>Paul Cairney blog: https://paulcairney.wordpress.com/2013/11/11/policy-concepts-in-1000-words-the-policy-cycle-and-its-stages/</p> <p>Mechanism of Climate Change</p> <p>Global Warming Reader pp. 18-54, 69-72</p> <p><i>Note on Global Warming Reader: this book is a compilation of many different kinds of information. Every time you read a chapter, I would like you to note whether the material in the chapter is fact or opinion, empirical or normative. In class, we will share our views. Why? Because climate change information is often a stew of fact and opinion, and it is important to be a critical reader if you want to be a smart reader; you have to be a smart reader if you want to make change.</i></p> <p>IPCC Fifth Assessment Report, Synthesis Report, Summary for Policymakers (2014) at www.ipcc.ch</p>
2	Jan 23	<p>The Impacts of Climate Change</p> <p>Human Rights and Migration</p> <p><i>Robles</i></p> <p>We scope the multitude of effects of climate change on our planet - and on us - to seek the factual basis we will need to learn, analyze and develop climate change policy.</p>

Objectives:

- Learn the types of physical impacts we can expect climate change will bring
- Consider how this will affect some human populations
- Reflect on the justice implications of these impacts
- Learn the legal framework for human rights, refugees and displaced persons

Discussion questions:

What information about climate change impacts (that is missing from the reports – that is, areas that need further research) would you like to have and why?

How do you think that human rights might help or hinder responses to climate change impacts?

Reading for class:

Impacts of Climate Change

Identify serious direct climate change impacts that have already occurred; impacts that are highly likely to occur in your lifetime and those that are highly likely to occur in the far future.

For each of the direct impacts that you identify, is there an indirect impact on humans? (for example, glacial melting increases runoff which increases flooding in some areas but also provides increased water for agriculture in other areas)

IPCC:

- AR5 Synthesis Report, Summary for Policymakers, pp 6-16;
- AR5 WGII, Summary for Policymakers;
- AR5 WGII, choose one of the regional chapters (ch 22-29) and skim it for the main points;
- look at the web page for AR5 WGII and compare the different ways information is presented (Summary, Video, Fact Sheet, Top Level Findings, etc)

Global Warming Reader – pp 88-93, Jeff Masters, Causes of the Russian Heat Wave and Pakistani Floods; pp 361-364, Images; pp 400-403, Nepal's Farmers on the Front Lines

Human Rights and Migration

What is the difference between a refugee, an internally displaced person, and climate migrant?

What are the key human rights found in the two Covenants?

Read the preamble and articles 1-27 of the International Covenant on Civil and Political Rights, available at: <http://www.ohchr.org/en/professionalinterest/pages/ccpr.aspx>

Read the preamble and articles 1-15 of the International Covenant on Economic, Social and Cultural Rights, available at: <http://www.ohchr.org/EN/ProfessionalInterest/Pages/CESCR.aspx>

Note the similarities and articles that are notably different, e.g., articles 11 and 15.

Choose one of these readings, posted in Sakai:Resources

- Sheila Watt-Cloutier, Petition to the Inter American Commission on Human Rights Seeking Relief from Violations Resulting from Global Warming Caused by Acts and Omissions of the United States, Summary (December 7, 2005)

- Michelle Leighton, “Climate Change and Migration: Key Issues for Legal Protection of Migrants and Displaced Persons,” German Marshall Fund of the United States (June 2010)
- Arpita Bhattacharyya & Michael Werz, Climate Change, Migration and Conflict in South Asia: Rising Tensions and Policy Options across the Subcontinent” (December 2012)

Additional information if you're interested:

US National Climate Assessment. 2014. Overview: Climate Change Impacts in the United States - <http://nca2014.globalchange.gov/>

Klaus Bittermann et al 2017, Global mean sea-level rise in a world agreed upon in Paris, Environ. Res. Lett. 12 124010 <http://iopscience.iop.org/article/10.1088/1748-9326/aa9def/pdf>

Website for UN Human Rights:
<http://www.ohchr.org/EN/ProfessionalInterest/Pages/CoreInstruments.aspx>

Knowledge and Skeptics

Berman, Evrard

Truth?

Global Warming Reader: Naomi Oreskes, pp. 74-78; Al Gore, Ross Gelbspan, pp. 97-125; James Inhofe, Michael Crichton, pp. 164-207

Science at EPA

Shapiro, “This Obscure Law ...”, The Hill (2017) (Sakai)
EPA Scientific Integrity Policy (Sakai)
EPA website for Allegations of a Loss of Scientific Integrity 2016 (Sakai)
Henry, “EPA Clears Pruitt ...”, The Hill (2017) (Sakai)

Bias in Our Brains

Osofsky & Peel, “Energy Partisanship”, 65 Emory Law Journal, 696 (2016) – read up to p. 716 (Sakai)

Lies?

Wiedeman & Stechschulte, “The Rockefellers vs. the Company That Made Them Rockefellers” - <http://nymag.com/daily/intelligencer/2018/01/the-rockefellers-vs-exxon.html>

3 Jan 30

Sources of Emissions – Wedges – C Footprint

4 Feb 6

Arroyo

See assignment sheet

Wedges (continued)

Each person –

5 Feb 13

1. Take the wedge that you presented yesterday and be sure your name is on the document; re-name the file with the name of the wedge, as succinctly as you can.

2. Upload it to Resources, Class 5 **by Friday**. (so everyone has time to look at all the wedges)

Each team –

1. Review the wedges posted in Resources.

2. With your team, choose 8 wedges (you may have already made a decision yesterday; that's ok, but note that there should be three additional wedges to choose from). You can use a wedge twice if you want. Remember that you are trying to guesstimate how much of the activity is needed to avoid emissions of (or to provide a sink for) 1 billion tons of carbon by 2050. As we discussed in class, this may be difficult to do for some of the wedges: just do your best and, ideally, be able to explain what you did. Also, remember that the wedge activity must be *additional*, that is, something that would not have been done under the current policies we have in effect.
3. Bring your preferred 8 wedges to class, and be prepared to present and discuss them. Please bring a hard copy of your choices and a very brief justification for each (1-2 sentences or a few bullet points) to hand to me.

Policy Options: Regulation and Alternatives

IF YOU WISH TO SUBMIT A READING SUMMARY FOR THIS CLASS, PLEASE USE THE READINGS IN THIS SECTION

Reading:

Osofsky & McAllister, pp 26-62 – Critical Dilemmas (Sakai)

McKibben, Van Jones, Billy Parish, pp. 211-231

Seth Wynes and Kimberly A Nicholas 2017 Environ. Res. Lett. 12 074024.

Obama, B. 2017. The irreversible momentum of clean energy. Science Jan 9.
<http://science.sciencemag.org/content/early/2017/01/06/science.aam6284.full>

Kolbert, E. 2015. Unconventional Crude. Field Notes from a Catastrophe. (Sakai)

IPCC. 2014: Assessing Transformation Pathways. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, pp. 418-420.

Discussion questions:

Explain what is meant by “complementarity” and “discontinuity” of mitigation and adaption strategies as discussed by Jones, et al. in Osofsky & McAllister. Can you think of illustrations (note that they are speaking in the context of a region in Australia)?

What is meant by “no regrets” policies?

How did Alex Farrell analyze the problem of externalities? How does Farrell’s approach compare to Kolbert’s?

As a policy analyst, consider the merits of the strategies proposed (or discussed) in these readings. You might reflect on where in the policy cycle each one fits; what kind of analysis the proponents undertake; which stakeholders are favored; how costs and benefits are identified and valued.

Adaptation I – New Jersey

Reading

J.B. Ruhl, chapter 20 – Adaptation, in Gerrard, Freeman

Look at the website for New Jersey Climate Adaptation Plans just to see what is available:
<http://www.georgetownclimate.org/adaptation/state-information/overview-of-new-jerseys-climate-change-preparations/overview.html>

And read:

New Jersey Climate Adaptation Alliance (NCAA). 2014. Resilience. Preparing New Jersey for Climate Change: Policy Considerations from the New Jersey Climate Adaptation Alliance. Edited by Matt Campo, Marjorie Kaplan, Jeanne Herb. New Brunswick, New Jersey: Rutgers University.

Play at least two games of: Stop Disasters Game – an interactive game with multiple disaster scenarios (actually is both informative and entertaining – also, it needs Flash to run)
<http://www.stopdisastersgame.org/en/home.html>

Lazrus H. 2015. Risk Perception and Climate Adaptation in Tuvalu: A Combined Cultural Theory and Traditional Knowledge Approach. *Human Organization* 74: 52-71

As you read, consider:

What are the two modes of adaptation most discussed in the policy literature?

For New Jersey, what are some ways proposed to implement those approaches?

For the New Jersey strategies, which are best implemented by the federal government, which by state government, which by local (city and town) government, and which should be implemented by non-governmental entities? Why? What barriers, if any, do you foresee to cooperation and coordination?

Compare the New Jersey approach to Tuvalu and to the Stop Disasters Game.

Climate Justice

D. Jamieson, 'Two Cheers for Climate Justice,' 82:3 *Social Research: An International Quarterly* 791-809 (2015).

As you read, recollect what we studied in relation to human climate migration and human rights.

Social Cost of Carbon

The Social Cost of Carbon (SCC or SC-CO₂) is used in federal regulations to value the costs and benefits of changes in CO₂ emissions. Whether it continues to be used – currently the requirements are based on Executive Orders and a court decision – or not, it is a policy tool that has become an essential part of climate governance. There have been earlier attempts to apply policy analysis tools to the problem, notably the Stern Review on the Economics of Climate Change (2007), which its author says understated the cost of climate change.

Questions for comprehension

What is the Social Cost of Carbon?

How is the SCC derived? Does it only look at emissions and harms in the US – how does it handle the fact that both are global in nature?

What are the criticisms of how the SCC is derived, both from those who think it's too low and those who think it's too high?

What are the SCC figures proposed by the USG report? the higher figure proposed by Van den Bergh and Botzen?

What is a discount rate? What are the different approaches to selecting a particular discount rate? Why does it matter?

What are the criticisms of using a SCC?

Reading

What is the Stern Review? *The Guardian* (2011)

<https://www.theguardian.com/environment/2011/feb/15/stern-review>

Brian Kahn, 10 Years on, Climate Economists Reflect on Stern Review, Climate Central, <http://www.climatecentral.org/news/climate-economists-stern-review-20827>

Richard L. Revesz et al., Improve economic models of climate change, 508 Nature 173-174 (2014).

[R. E. Kopp and B. K. Mignone \(2012\). The U.S. government's social cost of carbon estimates after their first two years: Pathways for improvement. *Economics* 6: 2012-15. doi:10.5018/economics-ejournal.ja.2012-15](#)

Billy Pizer, Social Cost of Carbon, Living on Earth (2017)
<http://www.loe.org/shows/segments.html?programID=17-P13-00003&segmentID=1>

Andrew Revkin, Will Trump's Climate Team Accept Any 'Social Cost of Carbon'? [ProPublica](#) (2017)

Frank Ackerman and Elizabeth A. Stanton "The social cost of carbon", real-world economics review, issue no. 53, 26 June 2010, pp. 129-143,
<http://www.paecon.net/PAEReview/issue53/AckermanStanton53.pdf>

If you're confused about discount rates, read: [David Roberts, Discount rates: A boring thing you should know about \(with otters!\)](#), [Grist](#) (2012).

If you'd like to look at the Stern Review yourself, here's the [link](#).

Adaptation II – Water, Security

Water

Climate change impacts on water resources are an example of one of the sources of a social cost of carbon. We are going to analyze those impacts more closely through these readings and class discussion.

Reading

Alana M. Wilson, Sierra Gladfelter, Mark W. Williams, Sonika Shahi, Prashant Baral, Richard Armstrong, And Adina Racoviteanu, High Asia: The International Dynamics of Climate Change and Water Security, 76:2 Journal of Asian Studies, 457-480 (2017). [Sakai]

Oldfield, Water strategy represents an emerging opportunity ..., The Hill (2017) [Sakai]

Discussion Questions

What effect will higher air temperatures have on water supply in Asia? What is the cryosphere? What are the uncertainties about these effects? Why is it important to distinguish snow melt and glacial melt?

What potential source/s of impacts on ice and snow melt are there other than temperature?

How do people in the region use water, and how will their use be affected by climate change impacts described in Wilson, et al.? What are the points of debate around *who* will be harmed and *why* they will be harmed (for example, will the harms be the result of a purely *natural* disaster)?

What policies are recommended?

Security

You will recollect that the SCC was criticized for not including the consequences of climate change impacts, in particular the increased likelihood of armed conflict and terrorism resulting from impacts like water shortages. These readings sketch the possible relationship

between climate change impacts and security, but they are chosen to examine the arguments for and against thinking of climate change in terms of national or global security.

Pay attention, as you read, to the differing meanings of “security” in these readings – as Wikipedia explains, “Security mostly refers to protection from hostile forces, but it has a wide range of other senses: for example, as the absence of harm (e.g. freedom from want); as the presence of an essential good (e.g. food security); as resilience against potential damage or harm (e.g. secure foundations); as secrecy (e.g. a secure telephone line); as containment (e.g. a secure room or cell); and as a state of mind (e.g. emotional security).”

Discussion questions

What were the differing views of nations speaking at the United Nations in 2007? What arguments did they make? What role does the United Nations have that makes this a pertinent question for the UN Security Council? How has the Security Council addressed climate change?

As U.S. Ambassador to the United Nations, what position did Susan Rice take in 2011? Is it consistent with the U.S. Director of National Intelligence’s threat assessment?

What might motivate climate change activists to want to encourage the U.S. Government to think of climate change as a national security issue? Compare Hayes & Knox-Hayes’s analysis to the descriptions of the U.S. national discourse about climate change in the readings from Class 3.

Reading

Read “What is the UN Security Council” first - <http://www.un.org/en/sc/about/>

UN Security Council, First-Ever Debate on Impact of Climate Change on Peace, Security, Press Release SC/9000 (17 April 2007) [Sakai – the complete document is also posted in Sakai]

Security Council Report, In Hindsight: The Security Council and Climate Change-An Ambivalent Relationship (August 2017) [Sakai]

Director of National Intelligence, Worldwide Threat Assessment of the US Intelligence Community (2017) [Sakai] – pp. i, 13-14 (Arctic and Envtl)
<https://www.dni.gov/files/documents/Newsroom/Testimonies/SSCI%20Unclassified%20SFR%20-%20Final.pdf>

Werrell & Femia, Climate Change in the Worldwide Threat Assessment of the US Intelligence Community (2017) [Sakai]

Hayes & Knox-Hayes, Security in Climate Change Discourse, Global Environmental Politics (2014). [Sakai]

March 10
Saturday

Draft Policy Memo due

International – UNFCCC, Kyoto Protocol, Montreal Protocol, Paris Agreement

Institutions

9

March 20

First, learn about institutions for global collective action problems like climate change:

Oran R. Young, Building Regimes for Socioecological Systems: Institutional Diagnostics in Institutions and Environmental Change (Oran R. Young, Leslie A. King & Heike Schroeder, eds. 2008). [Sakai]

As you read about the international climate agreements, apply Young’s diagnostics to the UNFCCC, Kyoto Protocol, and Paris Agreement.

UNFCCC

Essential Background - http://unfccc.int/essential_background/items/6031.php

The UNFCCC, http://unfccc.int/essential_background/convention/items/6036.php

Kyoto Protocol

The Kyoto Protocol, http://unfccc.int/kyoto_protocol/items/2830.php

Paris Agreement

First, learn about the Paris Agreement -

Sara Barnowski, Bonnie Smith & Tracy Bach, Will a Paris Agreement [Decrease] [Solve] [Do Nothing On] Climate Change? VT Law School Press Release (8 Dec 2015)

Robinson Meyer, A Reader's Guide to the Paris Agreement, The Atlantic (16 Dec 2015) <https://www.theatlantic.com/science/archive/2015/12/a-readers-guide-to-the-paris-agreement/420345/> - *As you read this, refer to the Paris Agreement itself and read the articles mentioned by Meyer.*

The Paris Agreement, U.N. FRAMEWORK CONVENTION ON CLIMATE CHANGE [Sakai]

Read about NDCs at <http://unfccc.int/focus/items/10240.php>

Then click the blue button to access the NDC Registry (interim).

Read China's NDC, one NDC from a developed country (such as the USA or France—you might refer to the [Annex I list](#)), one from a developing country (such as India or Palau), and one from an emerging economy (such as Mexico, Turkey). Compare their commitments:

- Do they plan to reduce emissions or to slow the rate of emissions growth?
- Do the mitigation actions apply economy-wide or to particular sectors?
- Does the mitigation commitment change if other countries make certain reductions or provide financial assistance?
- Is there an adaptation commitment?
- Is there a financial assistance commitment?

Bring in some notes about the NDCs you look at for class discussion.

Now,

Why leave?

Jennifer A. Dlouhy, 'Charming Betsy' Doctrine Looms over Trump Climate Decision, Bloomberg BNA International Environment Reporter (17 May 2017).

Will it matter?

Justin Gillis & Nadja Popovich, The U.S. Is the Biggest Carbon Polluter in History. It Just Walked Away From the Paris Climate Deal. NYT (1 June 2017).

<https://www.nytimes.com/interactive/2017/06/01/climate/us-biggest-carbon-polluter-in-history-will-it-walk-away-from-the-paris-climate-deal.html> or <https://nyti.ms/2rryDnU>

Michael Bloomberg: US states and businesses will still meet Paris targets, The Guardian (2 June 2017), text and video. <https://www.theguardian.com/environment/2017/jun/03/michael-bloomberg-us-states-and-businesses-will-still-meet-paris-targets>

US – National Policies

Bellisari

Some things to consider as you read: *who* is acting (for example, the president, senators, judges, NGOs, scientists?); keep track of dates to understand which political party facilitated an action (it's usually, but not always, what you might think); use this to learn what types of actions are best targeted at which parts of society (federal government, state government, etc.); consider how a sudden shift in political leadership can have far-reaching effects; look at what institutional controls exist over those effects.

National

Read: Linda Tsang, U.S. Climate Change Regulation and Litigation: Selected Legal Issues, Congressional Research Service (April 2017). [Sakai]

In class we will focus on pp. 1-15 and 38-39, but read the whole report, which we will cover more generally.

Based on this reading, What is likely to happen on 1 April 2018?

List the sources of GHG emissions that are regulated under the Clean Air Act.

Skim:* Exec. Off. of the President, The President's Climate Action Plan (2013), available at <https://obamawhitehouse.archives.gov/sites/default/files/image/president27sclimateactionplan.pdf>

Non-Regression Principle

Read: Michel Prieur, Non-regression in environmental law [Sakai]

Not required but if you're interested: The Sabin Center has an excellent chart that tracks climate change litigation: <http://climatecasechart.com/us-climate-change-litigation/>

* 'Skim' means read the table of contents, the executive summary, the topic sentences of sections that seem especially important, and the conclusion; after you've done this, ask yourself what were the key points or new information that you didn't have before so that you've captured the important information for recall.

Electricity

Read the "Basics" at

https://www.eia.gov/energyexplained/index.cfm?page=electricity_in_the_united_states

Read the **New Jersey Profile** from the U.S. Energy Information Administration at:

<https://www.eia.gov/state/analysis.php?sid=NJ>

What are NJ's major potential energy resources? Where do we get our electricity from now?

What is likely it's major energy challenge in the next year?

Is energy production in NJ distributed or centralized?

Does NJ have a renewable energy requirement?

How does NJ rank nationally in terms of energy intensity and per capita energy use?

This short reading will reinforce your understanding of federal energy policy, discussed last week, and will introduce new information about the market forces and other pressure on the electric power industry.

McCarthy, **Reconsidering the CPP** (2017)

Rossi & Hutton, Electricity Background and Trends, In Global Climate Change and U.S. Law, Second Edition, Gerrard & Freeman (eds. 2014), pp. 1-38. (we'll finish the chapter for next class)

Focus your attention to understand the following:

Electricity generation, transmission and distribution.

The electric power demand and supply balance – what it means, why it is both essential and difficult to maintain, and how it is affected by different sources of generation.

The structure of the electric power industry – here, understand the role of state, regional and federal actors.

PURPA’s conservation and efficiency measures (highlighted in the text with red outline box).

Grid and transmission needs and how grid development helps or hinders renewable energy (section III).

Distributed versus centralized power generation.

State and Local Efforts

Osofsky & McAllister, *Climate Change Law & Policy*, chapter 5

What does Ostrom mean by multi-scalar and polycentric?

What activities are best done at the state level? Local level?

What incentivizes states and localities to act?

What do you think is the most effective action that a state can take to reduce GHGs? What about a locality? Why?

What is an RPS and is it supply- or demand-side management?

What are RECs and what do they do to reduce GHGs? Remembering our discussion of how RU can reduce its GHGs, can you see how RECs might help address air travel by students and faculty?

12 April 10

How do they work together, given that states are often competitive with each other, and that there are some legal obstacles like the dormant commerce clause, geographic distance, and even language differences if we are talking about transnational cooperation?

Look at the UNCC website, <http://newsroom.unfccc.int/lpaa/nazca/> and <http://climateaction.unfccc.int/>; and explore NAZCA

What does the acronym NAZCA stand for?

Who is involved in NAZCA?

What are some actions that NAZCA reports?

What are “America’s Pledge” and “We are still in”?

(<https://www.bloomberg.org/program/environment/americas-pledge/#overview>)

Cities and Subnationals <http://newsroom.unfccc.int/lpaa/cities-subnationals/>

Dale Jamieson - Climate Change and the Challenges to Democracy

Read: Marcello Di Paola & Dale Jamieson, *Climate Change and the Challenges to Democracy*, 72 U. Miami L. Rev. 369-424 (2018). [Sakai]

13 April 17

In Class 12 we discussed the concept of democratic legitimacy, and we considered whether local and state climate change measures engendered greater trust than more top-down approaches. We have also studied other aspects of the problem raised in this paper, such as the exploitation of freedom of speech by climate skeptics.

What do you see as the chief challenges to management of climate change in liberal democracies, and why?

Do you have suggestions for responses to the problems identified in the article?

April 21 Writing Assignment 2: Essay Due

Geoengineering

Alan Robock, 20 Reasons Why Geoengineering May Be a Bad Idea, Bulletin of the Atomic Scientists, Vol. 64, No. 2, p. 14-18, 59.

14

April 24

Dale Jamieson, Some whats, whys and worries of geoengineering, Climatic Change (2013) 121:527-537

Simon Nicholson, Sikina Jinnah & Alexander Gillespie (2018) Solar radiation management: a proposal for immediate polycentric governance, Climate Policy, 18:3, 322-334.

And listen to: Nicholson talk about the paper with Carolyn Turkaly in the 35 min podcast Polycentric Governance of Solar Radiation: <http://ceassessment.org/podcasts/>

Final Exam per schedule (take home at scheduled time)