

Fall 2018 TuTh 1:25-2:40 Gross 100C
The History of Energy and Power Generation (Energy 190FS-01)

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Office hours by appointment

Energy is so fundamental to our lives that we often take it for granted. But each time we flip a light switch or fill our cars with gas, we enter a chain of relationship connecting us to the workers, businesses, and natural forces that produced the power we expect to harness. In this course, we will explore the history of those networks from the beginning of the industrial era to the recent past, primarily in the United States—though any exploration of the U.S.’s energy history has a scope broader than its borders by necessity. Through readings and class discussions, we will examine the social, economic, and political forces that spurred transitions between energy regimes and consider how those forces created consequences shaped by their discrete historical contexts. Along the way, we’ll ask (and try to answer) questions including, but not limited to, what have been the most significant changes in energy systems since the early nineteenth century? What were the consequences (both intended and unintended) of those changes? How did the United States become the world’s leading energy consumer? How did social, political, and cultural trends influence that trajectory? By the end of the course, you will have a better understanding of not only how to evaluate and construct historical arguments, but also how to use history to address pressing contemporary concerns.

Required Books:

Vacliv Smil, *Energy & Civilization: A History*

Thomas Andrews, *Killing for Coal: America’s Deadliest Labor War*

Daniel Yergin, *The Prize: The Epic Quest for Oil, Money, & Power*

Gretchen Bakke, *The Grid: The Fraying Wires between Americans and Our Energy Future*

Meg Jacobs, *Panic at the Pump: The Energy Crisis and the Transformation of American Politics in the 1970s*

Major Assignments

- **Discussion Board Posts**

Periodically, the class schedule will ask you to compose a specific type of discussion board post. For all other class meetings, please post one question you believe will prompt a productive conversation about the assigned readings (either class prep documents or required books), by 6PM the day before.

- **Midterm & Final Exams**

Our Midterm will consist of two parts: an in-class exam which will ask you to identify 4 people, events, or concepts and a ~2,500 word essay due before midnight the day of the in-class exam. The format for our (non-cumulative) Final will be the same.

- **Team Research Project**

Over the course of the semester, you and 2-3 classmates will conduct a team research project. Your research should include analysis of both primary and secondary documents and will result in two products: 1. a 18-20 page (double-spaced, *TNR*) research memo, and 2. A 25-30 minute presentation of your findings.

Assessment

Grades will be determined based on the following:

- **Attendance and Participation¹ (10%)**
- **Midterm (20%)**
- **Final (30%)**
- **Team Research Project (40%)**

Extra Credit

You have two opportunities to earn extra credit:

1. **Attend any Energy Initiative-sponsored event (1 point/max 3x).** Email a photo/video of the event with a brief caption (a quote from a speaker or a reflection on what you took away from the event) to both me (jonathon.free@duke.edu) and Sarah Connette (sarah.connette@duke.edu) **within 6 hours** of the event.
2. **Win the team research project competition (5 points).** At the end of the semester, each team will present their research in front of the entire class and a panel of 3 judges, who will score your presentation on content, style, and imagination. I will add 5 points to the final grade of each member of the winning team.

Academic Integrity

In your written work, take pains to give credit where credit is due and enable readers to see the sources on which you base your case. The Writing Studio is also an excellent resource for consultation. So that there is no doubt, review these documents before writing:

"Plagiarism: Its Nature and Consequences":

<http://library.duke.edu/research/plagiarism/index.html>

"Citing Sources and **Avoiding Plagiarism**: Documentation Guidelines":

<http://library.duke.edu/research/citing/index.html>

You are welcome—indeed, encouraged—to study with other students in the class and discuss course materials with them. But it is a serious breach of academic integrity to confer on the content of papers or to seek out or otherwise consult exams or papers from students enrolled in previous years. All papers must be also original and exclusive to this course. Any concern about

¹ This includes actual attendance, discussion board posts, and in-class participation. If you need to miss class, please inform me beforehand. Otherwise, your absence will result in a 2.5% debit. A lack of participation during class (including failure to complete a discussion board post) will result in the same.

intellectual dishonesty will be result in a formal investigation with the dean's office.

Class Schedule

Date	Topic	Class Prep*	Assignment
Tuesday August 28	Introduction		
Thursday August 30	Energy Systems	Huber, "Energy and Social Power," from <i>The Routledge Handbook of Political Ecology</i> , Tom Perreault, et al eds.; Huber & McCarthy, "Beyond the Subterranean Energy Regime?"	Read any subsection of interest to you in <i>Encyclopedia of Energy, Natural Resources, and Environmental Economics</i> . Write down 5 keywords you would use to find materials for a historical research project related to that topic. Bring those keywords and your laptop to class.
Tuesday September 4	Energy Transitions	<i>Harpers</i> , "A Fuel to Supplant Coal" (1902); Bagge, "Coal: An Overlooked Energy Source" (1972); Plumer, "Trumps New Pollution Rules Still Won't Save the Coal Industry" (2018)	Search for sources that you think would help put the course prep documents in historical context. On the discussion board, post at least three questions these docs leave you with.
Thursday September 6	Steam Power	Atack, et al, "Steam Power, Establishment Size, and Labor Productivity Growth in Nineteenth Century American Manufacturing"	
Tuesday September 11	America's First Oil Boom	Black, "A Good Time Coming for Whales" from <i>Petrolia: The Landscape of America's First Oil Boom</i>	
Thursday September 13	The Social Dimensions of the new Mineral Energy System	Lewis, "From Peasant to Proletarian"	
Tuesday September 18	Turning on the lights	"The Atlantic Telegraph" (1858); "A Magician's Residence" (1868); Sloan, "Electricity-Mankind's Universal Servant" (1932)	On the discussion board, write a ~500 word exegesis of one of the course prep documents.

Thursday September 20	A culture of abundance	Nye, "Power Incorporated," from <i>Consuming Power: A Social History of American Energies</i>	
Tuesday September 25	Mine Wars/Mines & War	Gleason, "Company-Owned Americans" (1920); Stolberg, "The Tragedy of Coal" (1922); Stanley, "The Miners' Rebellion" (1930); Norton, "Feudalism in West Virginia" (1931)	On the discussion board, write ~500 words synthesizing the course prep documents into a single narrative.
Thursday September 27	Early Hyrdoelectricity	Manganiello, "Hitching the New South to 'White Coal': Water and Power 1890-1933"	
Tuesday October 2	Book Discussion	Smil, <i>Energy and Civilization</i> ; Andrews, <i>Killing for Coal</i>	DEADLINE: Finalize Research Topic
Thursday October 4	Midterm		In-class ID quiz; Essay due at 11:59PM
Tuesday October 9	No Class--Fall Break		
Thursday October 11	Electric Power	Selections from <i>Electric Power on the Farm</i> (1936)	
Tuesday October 16	Electricity and Mass Consumption	Selections from <i>A Guide for Members of Cooperatives</i> (1939)	
Thursday October 18	Fossil Fueled Modernity	Jones, "An Upthrust from Barbarism" from <i>Carbon Nation</i>	DEADLINE: Research Check-in #1
Tuesday October 23	An even bigger boom	McFarlane, "Oil on the Farm: The East Texas Oil Boom and the Origins of an Energy Economy"; Selections from East, <i>The Boomers</i> .	On the discussion board, write ~500 words about the extent to which reading East changes the story presented by McFarlane.
Thursday October 25	Oil and Empire	Jones, "America, Oil, and War in the Middle East"	
Tuesday October 30	Guest Lecture	TBD	
Thursday November 1	Book Discussion	Bakke, <i>The Grid</i> ; Yergin, <i>The Prize</i>	
Tuesday November 6	Atomic Power	"A Short History of Nuclear Regulation" (2010)	
Thursday November 8	Challenges & Crises	"The Constraints of Environmental Quality" and "Energy Needs" from <i>Selected Readings on Economic Growth</i> (1972)	DEADLINE: Research Check-in #2

Tuesday November 13	The Energy Crisis and Politics	McCloskey, "The Energy Crisis: The Views of an Environmentalist"; Shumbert, "The Energy Crisis: It's Whys and Wherefores"	
Thursday November 15	Energy After 1978	McKibben, "Power to the People"; Becker & Naumann, "Energy Democracy: Mapping the Debate on Energy Alternatives"	
Tuesday November 20	<i>Harlan County, USA</i>		
Thursday November 22	No Class-- Thanksgiving Break		
Tuesday November 27	Book Discussion	Jacobs, <i>Panic at the Pump</i>	
Thursday November 29	Final		In-class ID quiz, essay due at 11:59PM
Tuesday December 4	Team Research Presentations		
Thursday December 6	Team Research Presentations & Award Ceremony		

*All class prep readings can be found on Sakai