



Utilities and Electricity Markets: Regulation in the United States

PPHA 36925

Spring 2024

Alternating Weeks, Weds. & Fri., 9-11:50 a.m.

Keller Room #2112

(see Course Plan, page 2, for precise dates)

**Periodic guest speakers via Zoom as well as office hours in evening of “off” weeks.
See “Course Plan” for full dates.**

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Course description

Many services today considered public conveniences are provided by private companies in the United States, subject to extensive governmental regulation. This course provides an overview of that regulation, and is divided into three parts: 1) the institutions and basic practices of state utility commissions and their federal counterpart; 2) the regulatory evolution that has attended the emergence of competition in the industry, at least in certain places, from open access and interconnection to grids once owned by local monopolies, to auction-based markets for energy, to the de-monopolization of the customers’ relationship with their energy supplier; 3) recent issues—including decarbonization, threats to electric reliability, the advent of customer-side energy resources, and modern regulatory capture—that raise questions on whether and how the forms and institutions of regulation can adapt to the most pressing demands of our time. This course is offered as an elective.

Learning objectives

Students can expect to emerge from the course with a strong foundation of knowledge in the subject matter described above. Just as importantly, students will learn how the institutions that administer regulation actually function, lending practical expertise to those who may wish to become involved in energy policy specifically or in government regulation generally. The course will be a combination of lectures, including guest speakers from government and industry, with robust opportunities for student participation, as well as hands-on exercises including a Moot Commission and an Energy Market Game.



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Course plan

The class will be taught intensively, with in-person instruction typically happening on Wednesday and Fridays from 9-11:50 a.m. on alternating weeks of the quarter. Those classes are denoted below.

Class 1 (March 20): Public Utilities: Origins and Economic Regulation

Class 2 (March 22): Economic Regulation: Revenue Requirement, Cost Allocation, & Rate Design

Class 3 (Apr. 3): Economic Regulation: Regulatory Institutions and the Beginnings of Restructuring

Guest speaker: The Hon. Kent Chandler, Chairman, Kentucky Public Service Commission

Class 4 (Apr. 5): Interim Assignment [*see description below under Assignments*]

Class 5 (Apr. 17): Restructuring: Open Access, Unbundling, and RTOs in the Electricity Sector

Class 6 (Apr. 19): Electricity Markets in Practice

Guest Speaker TBA

“Energy Market Game”: <https://www.energymarketgame.org/index.html>

Week of Apr. 22 via Zoom: TBA

Class 7 (**evening of Apr. 30**): Contemporary Issues in Utility Regulation

Guest speaker: The Hon. Doug Scott, Chairman, Illinois Commerce Commission

Class 8 (May 1): Contemporary Issues in Utility Regulation (cont’d)

Tour of Invenenergy Operations Control Center, Downtown Chicago

Week of May 6 via Zoom: TBA



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Major readings

There will not be a course textbook, and with only two exceptions—Thomas McCraw’s *Prophets of Regulation* and Katherine Blunt’s *California Burning*, both critically acclaimed biographical histories that may even be enjoyable by your friends and relations—all readings are available for download or otherwise will be electronically distributed.

Students should complete the readings that correspond to a particular class *before* that class, and prepare the “reading reflections” assignments described below accordingly.

Public Utility Regulation and Institutions

These classes will draw selected chapters and essays from the following works, in addition to selecting documents from a contentious utility proceeding before a state utility commission.

Classes 1-2

Origins of Regulation

Munn v. Illinois, 94 U.S. 113 (1877). Accessible at [Library of Congress](#); start at p. 123 (page 11 of PDF) and read to end of document.

McCraw, Thomas. (1984). *Prophets of Regulation*. Harvard University Press, pages 1-56 (Charles Francis Adams)

[optional further reading with a Chicago focus] Wasik, John F. *The Merchant of Power: Samuel Insull, Thomas Edison, and the Making of the Modern Metropolis* (2006).

Practice of Regulation [these readings provide a substantial basis for you to understand topics & readings for interim assignment]

Lazar, Jim. *Electricity Regulation in the United States: A Guide*, 2nd Edition (2016). [Regulatory Assistance Project](#). Chapters 1, 8, 10. (You may read Ch. 9 but it is covered in greater depth by the reading immediately below)

Electric Cost Allocation for a New Era: A Manual, ed. Mark LeBel. (2020). [Regulatory Assistance Project](#). Chapters 2, 3, 5, and 6.

The Institutions of Regulation

Lazar. *Electricity Regulation in the United States*. Chapters 4-7.

Hempling, Scott. (2008). “Commissions are not Courts; Regulators are not Judges.” <https://securereservercdn.net/198.71.233.202/012.6a8.myftpupload.com/wp-content/uploads/2021/11/Commissions-Are-Not-Courts.pdf>

Classes 3-4

Prefiled testimony and post-hearing briefing of a utility rate case for a regulatory commission. To be provided. Associated with interim assignment (see below).



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See the above readings associated with Classes 1-2 on the “Practice of Regulation” as well as course slidedecks, in order to augment and improve your arguments for the interim assignment.

The Origins of Restructuring and Electricity Markets

The readings for these weeks will focus on the liberalization of the utility sector, and discuss how electricity in particular remains an unfinished work—because of both greater political obstacles, the higher degree of physical complexity of the electricity system compared to other industries, and in some segments a more abiding presence of monopoly utilities.

Classes 5-6

Competition introduced to regulated industries

McCraw, *Prophets of Regulation*, pg. 222-99 (Alfred Kahn).

Wholesale Markets for Electricity

Federal Energy Regulatory Commission. (2024). Energy Primer: A Handbook for Energy Market Basics, Chapter 2 “Wholesale Electricity Markets” <https://www.ferc.gov/news-events/news/ferc-staff-issues-2024-energy-primer-handbook-energy-market-basics>

Cicala, Steve. (2022). “Imperfect Markets versus Imperfect Regulation in U.S. Electricity Generation” *American Economic Review*, 112(2): 409-441.

https://www.stevecicala.com/papers/elec_gov_v_mkt/elec_gov_v_mkt_draft_2.pdf

Retailing

Kavulla, Travis. (2023). “Why is the Smart Grid So Dumb? Missing Incentives in Regulatory Policy for an Active Demand Side in the Electricity Sector.” *Energy Systems Integration Group*.

<https://www.esig.energy/missing-incentives-in-regulatory-policy-for-active-demand-side/>

Electric Transmission

Peskoe, Ari. (2021). “Is the Utility Transmission Syndicate Forever?” *Energy Law Journal*, 42(1).

<https://www.eba-net.org/assets/1/6/5 - %5bPescoe%5d%5b1-66%5d.pdf>



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Contemporary Issues in Utility Regulation

The readings for these weeks, including the off-cycle Zoom lectures, are intended to layer on contemporary issues to previous weeks, using primary sources from policy or regulatory forums to elucidate these issues.

- *Rise of and Dependency on Natural Gas*
- *Climate Change and Renewable Energy*
- *Electric Reliability in the Energy Transition*
- *Distributed Energy Resources*
- *Modern Regulatory Capture*

These contemporary topics will also make appearances during the first seven weeks' discussion of fundamentals, so that these last two weeks should be understood as giving an opportunity for a deeper treatment—but not the only treatment—they will receive in the course.

Classes 7-8

Gas, Renewables, and Electric Reliability.

Read the executive summary and introduction of your choice of two (2) of the below reports:

- California Independent System Operator (CAISO), California Public Utilities Commission (CPUC), and California Energy Commission (CEC). (2021). *Final Root Cause Analysis: Mid-August 2020 Extreme Heat Wave*. <http://www.caiso.com/Documents/Final-Root-Cause-Analysis-Mid-August-2020-Extreme-Heat-Wave.pdf>;
- Federal Energy Regulatory Commission (FERC), North American Electric Reliability Corporation (NERC), and NERC Regional Entities. (2021). *The February 2021 Cold Weather Outages in Texas and the South Central United States: Staff Report*. <https://www.ferc.gov/media/february-2021-cold-weather-outages-texas-and-south-central-united-states-ferc-nerc-and>
- FERC, NERC, and NERC Regional Entities. (2023). *Inquiry into Bulk-Power System Operations During December 2022 Winter Storm Elliott*. <https://www.ferc.gov/news-events/news/ferc-nerc-release-final-report-lessons-winter-storm-elliott>

Behaving Badly (and the motivations for misconduct)

Blunt, Katherine (2022). *California Burning: The Fall of Pacific Gas and Electric and What It Means for America's Power Grid*. Portfolio.

The above book is optional, and you can instead choose to read the instructor's review of this book. Kavulla, Travis. "Utility Player: California's Disastrous Electricity Policy." *American Affairs* (Vol. VII, No. 1, Spring 2023). <https://americanaffairsjournal.org/2023/02/utility-player-californias-disastrous-electricity-policy/>



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Hempling, Scott. (2021). "No Anticompetitive Conduct, No Unearned Advantage: Effective Competition Depends on Merit." <https://secureservercdn.net/198.71.233.202/012.6a8.myftpupload.com/wp-content/uploads/2021/10/No-Anticompetitive-Conduct-No-Unearned-Advantage-Jan-2021.pdf>

Choice of two readings (you may skim/read lightly the one you select):

- Deferred Prosecution Agreement. (2020). *United States of America v. Commonwealth Edison Company*. Before the United States District Court for Northern Illinois. https://www.sec.gov/Archives/edgar/data/22606/000110465920084325/tm2025018d1_ex10-1.htm
- Deferred Prosecution Agreement. (2021). *United States of America v. FirstEnergy Corp.* Before the United States District Court for Southern Ohio. <https://www.sec.gov/Archives/edgar/data/1031296/000103129621000071/ex101-8k7x22x21.htm>

Hartman, Devin & Haugh, Michael. (2020). *Electric Competition: The Antidote to Bad Behavior*. R Street Institute. <https://www.rstreet.org/wp-content/uploads/2020/09/Final-No-205-electric-competition-updated.pdf>

Federal and state policy approaches to decarbonization in the electric sector

- Jenkins, Jesse, et al., *Climate Progress and the 117th Congress: The Impacts of the Inflation Reduction Act and the Infrastructure Investment and Jobs Act* (2023). https://repeatproject.org/docs/REPEAT_Climate_Progress_and_the_117th_Congress.pdf
- Energy and Environmental Economics. (2020). *Least Cost Carbon Reduction Policies in PJM*. https://www.ethree.com/wp-content/uploads/2020/10/E3-Least_Cost_Carbon_Reduction_Policies_in_PJM-1.pdf

Readings associated with off-week Zoom guest speakers

TBA

Assignments

The course is taught for a letter grade. There are three major elements of grading, equally weighted, with students (in exercising their right to choose a medium in Option #2) allowed to weight their grade more toward oral or written presentation.

1. **Class participation. Students will write "reading reflections," to be submitted no later than the Saturday before weeks on which the course meets, with the exception of the second week (in view of the interim assignment).** These will be no longer than two (2) pages, double-spaced. I will use those reflections to understand that a student has read the material and to guide discussion whenever possible, although they will not receive a letter grade. As well, students are expected to engage in class discussion, asking questions and contributing their views.



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2. **Interim Assignment: Moot Commission (Class 4, Apr. 5).** As an interim assignment, as an exercise relative to both the subject matter and institutions of utility regulation, a blended interactive/written exercise will be undertaken. Students will read certain critical materials from opposing parties in a utility rate case, and then will have the option either of:
 - Presenting their arguments (representing either the utility, the consumer, or another party) to a mock “Commission”: the instructor, the TA, and a real guest state public service commissioner, who also would give a short guest lecture and “render a decision” after student arguments were made. (Grading would not be determined by who ‘won’, but by the sophistication of the students’ understanding of the issues at hand.) *or*
 - Writing a policy memo, no more than 10 pages, from the perspective of Commission Advisory Staff, laying out the arguments of the two opposing parties, weighing them, and recommending to the Commission an outcome. **If a student elects this option, the policy memo is due Apr. 4 (the day before Class 4).**
3. **Final Paper, ~15 pages, DUE MAY 15.** Students will pick a topic of contemporary public-policy interest, propounding an analysis about whether and how utility regulation and electricity markets should adapt to address that topic. Ideally, students would use a case study or a selection of concrete examples to demonstrate the point. The paper’s proposed solution should offer a remedy to any problems identified, or should argue against remedies conventionally offered by others, or both.

Grading Criteria

The assignments above will be equally weighted in calculating a final letter grade.

- Class participation will receive an aggregate grade of complete/incomplete. Individual “reading reflections” will not receive a letter grade.
- Organized and lucid analysis that evinces an understanding of the subject matter is the primary criterion by which the interim assignment and final paper will be measured.
- For the final paper, the assigned course readings are intended to be read, and relied upon, as an inspiration; however, students are expected to do their own research to arrive at a topic for the final paper. There are numerous “ripped from the headlines” opportunities in this regard!
- The interim assignment, unlike the final assignment, does not require substantial external research. Instead, it will rely on readings from a utility-commission proceeding that have been assigned, to which students will apply what they have learned in lectures on the standards used in the regulation of utilities, and the conventions of ratemaking.
- Citation style for written products is at the student’s discretion, but consistent use is expected.
- Late assignments will not be accepted without prior approval of instructor or TA.
- Failure to attend classes will result in a lower class-participation grade.



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General Resources Available to Students

- [Harris Academic Support Programs and Handbook](#)
- [Student Wellness](#)
- [University Learning Resources](#)

Harris School and University of Chicago Policies

Include any text and links as desired to highlight or emphasize issues related to academic integrity, disability accommodations, diversity and inclusion, and video and audio recordings.

- [Harris School Policies](#)
- [University General Policies](#)
- [University Academic Policies](#)
- Policies on audio and video [recordings](#) and [deletion](#).