

Spring 2025: Utilities and Electricity Markets: Regulation in the United States, PPHA 36925

## **Information about this course**

### **Background and Goals**

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.

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.

### **Prerequisites**

N/A

### **Relationship to other programs**

Energy and Environmental Policy; Markets and Regulation

### **How this class will work**

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.

#### **Week 1**

Class 1 (March 26): Public Utilities: Origins and Economic Regulation

No Class (March 28):

#### **Week 2**

Class 2 (Apr. 9): Economic Regulation: Revenue Requirement, Cost Allocation, & Rate Design

Class 3 (Apr. 11): Economic Regulation: Regulatory Institutions and the Beginnings of Restructuring

### Week 3

Class 4 (Apr. 23): Interim Assignment [*see description below under Assignments*]

*Guest Speaker TBD*

Class 5 (Apr. 25): Restructuring: Open Access, Unbundling, and RTOs in the Electricity Sector

*Guest Speaker TBD*

### Week 4

Class 6 (May 7): Electricity Markets in Practice

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

Class 7 (May 9): Contemporary Issues in Utility Regulation

Tour: TBD (likely Invenergy Operations Control Center, Downtown Chicago)

### Week 5

Class 8 (May 21): Contemporary Issues in Utility Regulation (cont’d)

Class 9 (May 23): Contemporary Issues in Utility Regulation (cont’d)

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. Slides for lectures will be provided before class. There will be required and optional readings ahead of each class, along with a corresponding short reading reflection due before class begins that week. Reading reflections will be submitted via Canvas.

### Student assignments

1. Class participation. Students will write “reading reflections,” to be submitted by the date indicated below in the “Reading, topics and schedules” section of the syllabus. These will be 2-5 paragraphs. 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.
2. Interim Assignment: Moot Commission (Class 4). 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 maybe even a guest). 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 the day before Class 4.
3. Final Paper, ~15 pages, DUE MAY 26. 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.

### **Readings, topics, and schedules**

There will not be a course textbook, and with only one exception—Thomas McCraw’s *Prophets of Regulation* a critically acclaimed biographical history 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 (reading reflection due March 25<sup>th</sup>)**

##### **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*, 2<sup>nd</sup> Edition (2016). [Regulatory Assistance Project](#). Chapters 1, 8, 10, 11. (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://scotthemplinglaw.com/wp-content/uploads/2021/11/Commissions-Are-Not-Courts.pdf>

#### **Classes 3-4 (no reading reflection for these 2 classes)**

Pre-filed testimony and post-hearing briefing of a utility rate case for a regulatory commission. To be provided. Associated with interim assignment (see below). These regulatory filings will be provided via Canvas

### *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 (reading reflection due April 23<sup>rd</sup>)**

##### Competition introduced to regulated industries

McCraw, *Prophets of Regulation*, pg. 222-299 (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](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

(skim) Peskoe, Ari. (2021). “Is the Utility Transmission Syndicate Forever?” *Energy Law Journal*, 42(1). <https://www.eba-net.org/assets/1/6/5 - %5bPeskoe%5d%5b1-66%5d.pdf>

(skim) Catherine Hausman, Power Flows: Transmission Lines, Allocative Efficiency, and Corporate Profits, Nat’l Bur. of Econ. Res. Working Paper 32091 (Jan. 2024), <https://www.nber.org/papers/w32091>

## Contemporary Issues in Utility Regulation

*The readings for these weeks 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*
- *Utility Governance*

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

### **Classes 7-9 (reading reflection due May 7<sup>th</sup>)**

#### 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>

Grande, Michael. “Data Centers: More Gas Will Be Needed to Feed U.S. Growth,” S&P Global, Oct. 22, 2024. <https://www.spglobal.com/ratings/en/research/articles/241022-data-centers-more-gas-will-be-needed-to-feed-u-s-growth-13290987>

### Behaving Badly (and the motivations for misconduct)

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/>

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>

*Duke Energy Carolinas, LLC v. NTE Carolinas II, LLC*, 111 F.4th 337 (4th Cir. 2024).  
<https://www.ca4.uscourts.gov/opinions/222168R1.U.pdf>

(skim) Public Service Electric and Gas Company, Docket No. IN21-5-000, Dec. 5, 2024 Order Approving Stipulation and Consent Agreement.  
[https://elibrary.ferc.gov/eLibrary/filelist?accession\\_number=20241205-3039&optimized=false](https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20241205-3039&optimized=false)

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\\_ex\\_10-1.htm](https://www.sec.gov/Archives/edgar/data/22606/000110465920084325/tm2025018d1_ex_10-1.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

(skim) Jenkins, Jesse, et al., *Climate Progress and the 117<sup>th</sup> 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](https://repeatproject.org/docs/REPEAT_Climate_Progress_and_the_117th_Congress.pdf)

(skim) 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](https://www.ethree.com/wp-content/uploads/2020/10/E3-Least_Cost_Carbon_Reduction_Policies_in_PJM-1.pdf)

Retail and wholesale interactions

*Nantahala Power and Light v. Thornburg*, 476 U.S. 953 (1986). Accessible at [Library of Congress](#).

*Ky Power Company v. Kentucky Public Service Commission*, 86-CA-1031-MR (1988) (unpublished) (Canvas)

Kentucky Public Service Commission, Order, Case No. 2021-00481, Pages 1-9, 26-34, 43-59, May 4, 2022. [https://psc.ky.gov/pscscf/2021 Cases/2021-00481/20220504\\_PSC\\_ORDER.pdf](https://psc.ky.gov/pscscf/2021%20Cases/2021-00481/20220504_PSC_ORDER.pdf)

### Governance

Kavulla, Travis. (2019). *Problems in Electricity Market Governance: An Assessment*. <https://www.rstreet.org/wp-content/uploads/2019/08/FINAL-RSTREET180.pdf>

### **Grading policies and procedures**

The assignments described above will be equally weighted in calculating a final letter grade (each representing 1/3<sup>rd</sup> of your 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.

### **Instructor Office Hours**

“Office” hours will be offered during the evenings of “off” weeks, will be conducted virtually, and can be schedule via a Calendly link that will be available through Canvas.

### **Artificial Intelligence Policy**

AI shall not be used to actually write the submitted reading reflections, interim written assignment or final paper, but may be used for other purposes.

## **Academic Honesty**

All students suspected of academic dishonesty will be reported to the Dean of Students for investigation and adjudication. The disciplinary process can result in sanctions up to and including suspension or expulsion from the University. In addition to disciplinary sanctions, students who commit academic dishonesty will receive, at minimum, the following grade penalties:

- If the academic dishonesty occurred on the interim assignment, the student will receive a score of zero on that assignment, and the student's highest possible letter grade for the course will be a C.
- If the academic dishonesty occurred on a reading reflection, the student will receive an incomplete for that, and the student's highest possible letter grade for the course will be a C.
- If the academic dishonesty occurred on the final paper, the student will receive a score of zero for that assignment, and the student's highest possible letter grade for the course will be a C.

## **Teaching assistant(s) and/or graders**

**TBD**

## **General Resources Available to Students**

Include any texts and links as desired:

- [Harris Academic Support Programs and Handbook](#)
- [Student Wellness](#)
- [UChicagoGRAD](#)

## **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](#)
- Policy on audio and video [recordings](#)