

Energy Regulation and Markets
Spring 2025
University of Florida Levin College of Law
Semester Syllabus – Law 6930 - 2 credits

Professors: William Massey and Don Santa

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Meeting Time: Monday, 5:30 – 7:30 pm

Location: Synchronous remote course via Zoom. There will be a few opportunities to meet in person during the semester, but in-person attendance is not required.

Office Hours: Monday, 3:30-5:30 pm via Zoom

Course Description and Objectives:

Energy markets in the United States are undergoing a long-term transition to cleaner energy resources, driven in large part by the goal of significantly reducing greenhouse gas (GHG) emissions and the emergence of new technologies. While some individual states have enacted all-encompassing plans to reduce GHG emissions, there is no comprehensive federal statutory framework for addressing climate change.

The clean energy transition is not the only transition affecting our energy system. The oil and natural gas abundance attributable to the shale revolution has affected both our domestic energy economy and the U.S. role in global energy markets. Significant policy, legal and regulatory questions have arisen at the intersection of these two trends and regulators in many cases must rely on laws enacted decades ago to address novel questions arising in connection with these transitions.

The course will examine these energy market transitions through the lens of the regulation of the electric power and natural gas industries in the United States. In particular, the course will focus on the Federal Energy Regulatory Commission (FERC), the independent agency charged with regulating transportation, price and competition in wholesale electric and natural gas markets pursuant to the Federal Power Act (FPA) and the Natural Gas Act (NGA), as well as the role of state public utility regulators acting under the laws empowering them to regulate these industries at the retail level.

We will examine eight main areas: (i) given the imperative of significantly reducing carbon emissions, what resources will define the energy supply and delivery systems of the future, and what regulatory policies will govern such resources; (ii) foundational laws and policies governing energy markets and non-discriminatory transmission by wire and pipeline of electricity and natural gas; (iii) the prevailing market structure in wholesale electric power and natural gas markets resulting from FERC restructuring initiatives pursuant to the FPA and NGA; (iv) the legal, regulatory and market responses to ongoing challenges, including market-based pricing, carbon pricing, and market structure; (v) “hot topics” such as the shale gas revolution, pipeline and electric transmission infrastructure development and cost allocation, and LNG exports; (vi) FERC’s role in evaluating GHGs and in integrating new energy resources to participate in wholesale electricity markets (e.g., distributed energy resources, renewables and storage), and generator interconnection challenges; (vii) the prevention of energy market manipulation pursuant to an enforcement and compliance model derived, in large part, from securities market regulation; and (viii) the constant interplay among lawmakers, regulators and affected stakeholders.

Students will gain an appreciation for the legal and market challenges confronted by regulators, market participants and other stakeholders during the market transition.

Student Learning Outcomes:

- 1) Comprehension of the major operative provisions of the statutes that provide the basis for federal regulation of electric and natural gas markets (FPA, NGA and parallel state laws).
- 2) Comprehension of the contemporary structure of wholesale electric power and natural gas markets resulting from the restructurings implemented by FERC pursuant to such laws, as well as the contrast in how different states have chosen to structure and regulate such markets at retail.
- 3) Comprehension of the key regulatory and market challenges arising during the transition to cleaner energy.
- 4) Based on the foregoing, a demonstration of the ability to analyze current issues and developments affecting electric and natural gas markets via

participation in class discussion and an in-class project presentation by student groups.

Required Reading Materials:

Eisen, Hammond et al. Casebook, *Energy, Economics and the Environment – Cases and Materials – Sixth Edition*, University Casebook Series, Foundation Press. Please make sure you have the latest edition.

Please be sure to register for the Canvas course and have any required materials with you in print or easily accessible electronic form in class. You are responsible for checking your Canvas page and the e-mail connected to the page on a regular basis for any class announcements or adjustments.

Additional Background Materials:

In addition to readings from the Eisen casebook and materials posted on Canvas, the following publications are recommended as reference materials if students have questions about concepts and terminology in connection with the subject matter of the course. Links to both publications will be posted on Canvas.

Office of Energy Policy and Innovation, Federal Energy Regulatory Commission, *Energy Primer: A Handbook for Energy Market Basics* (December 2023)

Lazar J., *Electricity Regulation in the US: A Guide – Second Edition*

Course Expectations and Grading Evaluation:

Students will be evaluated based upon a final exam, their part in an in-class group presentation and class participation. This course follows the Levin College of Law’s grading policies found here: <https://www.law.ufl.edu/life-at-uf-law/office-of-student-affairs/current-students/uf-law-student-handbook-and-academic-policies>.

Course grades will be weighted 70 percent for the final exam, 20 percent for the in-class group presentation and 10 percent for class participation. Students should anticipate a final exam consisting of 50 multiple choice questions and five short essays. Students will be assigned to a small group for the in-class group presentation. The professors will assign presentation topics based on each group’s ranked choices from among a list of presentation topics posted by the professors.

Class Component	Percent of Grade
Final Exam	70%

In-Class Group Presentation	20%
Class Participation	10%
TOTAL	100%

Class Attendance Policy:

Attendance in class is required by both the ABA and the Law School. Attendance will be taken at each class meeting. Students are allowed *two absences* during the course of the semester. Students are responsible for ensuring that they are not recorded as absent if they come in late. A student who fails to meet the attendance requirement will be dropped from the course. The law school’s policy on attendance can be found [here](#).

Compliance with UF Honor Code:

Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Law Honor Code located [here](#). The UF Law Honor Code also prohibits use of artificial intelligence, including, but not limited to, ChatGPT and Harvey, to assist in completing quizzes, exams, papers, or other assessments unless expressly authorized by the professor to do so.

INFORMATION ON UF LAW GRADING POLICIES:

The Levin College of Law’s mean and mandatory distributions are posted on the College’s website and this class adheres to that posted grading policy. The following chart describes the specific letter grade/grade point equivalent in place:

Letter Grade	Point Equivalent	Letter Grade	Point Equivalent
A (Excellent)	4.0	C (Satisfactory)	2.0
A-	3.67	C-	1.67
B+	3.33	D+	1.33
B	3.0	D (Poor)	1.0
B-	2.67	D-	0.67
C+	2.33	E (Failure)	0.0

The law school grading policy is available [here](#).

OBSERVANCE OF RELIGIOUS HOLIDAYS:

UF Law respects students' [observance of religious holidays](#).

- Students, upon prior notification to their instructors, shall be excused from class or other scheduled academic activity to observe a religious holy day of their faith.
- Students shall be permitted a reasonable amount of time to make up the material or activities covered in their absence.
- Students shall not be penalized due to absence from class or other scheduled academic activity because of religious observances.

EXAM DELAYS AND ACCOMMODATIONS:

The law school policy on exam delays and accommodations can be found [here](#).

STATEMENT RELATED TO ACCOMODATIONS FOR STUDENTS WITH DISABILITIES

Students requesting accommodations for disabilities must first register with the Disability Resource Center (<https://disability.ufl.edu/>). Once registered, students will receive an accommodation letter, which must be presented to the Assistant Dean for Student Affairs (Assistant Dean Brian Mitchell). Students with disabilities should follow this procedure as early as possible in the semester. It is important for students to share their accommodation letter with their instructor and discuss their access needs as early as possible in the semester. Students may access information about various resources on the UF Law Student Resources Canvas page, available at <https://ufl.instructure.com/courses/427635>.

STUDENT COURSE EVALUATIONS

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Click [here](#) for guidance on how to give feedback in a professional and respectful manner. Students will be notified when the evaluation period opens and may complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students [here](#).

RECORDINGS OF CLASS

Students with legitimate absences will be provided access to the recording of the Zoom class for which they were absent.

ABA OUT-OF-CLASS HOURS REQUIREMENTS: ABA Standard 310 requires that students devote 120 minutes to out-of-class preparation for every

“classroom hour” of in-class instruction. Each weekly class is approximately 2 hours in length, requiring at least **4 hours of preparation** outside of class including reading the assigned materials and preparation for the in-class group presentation during the weeks in advance of the presentation.

Organization of the Curriculum and Assignments

This syllabus is offered as a guide to the direction of the course, subject to change at the discretion of the professors.

Class 1: January 13, 2025

Introduction of professors; review of syllabus and course curriculum; overview of U.S. electric and natural gas industries; why we regulate these essential industries; allocation of jurisdiction between federal and state regulators; applicable administrative law principles.

Class 1 Reading Assignment:

1. Eisen, et al. Casebook, Read the following sections:
 - Public Utility Principles, pp. 35-56
 - The Functions of Modern Public Utility Regulation, pp. 70-81
 - State Utility Regulation, pp. 82-90
 - The Flow of Gas From Wellhead to Downstream End Users, pp. 572-574
2. Lazar, J., Electricity Regulation in the US: A Guide. Second Edition – Chapters 1-4, pp. 3-28 (posted on Canvas).
3. Please click around the FERC.gov website to learn basic information about FERC and its regulatory responsibilities regarding electricity and natural gas.
4. Compendium -- Sections of U.S. Constitution Affecting Energy Regulation (posted on Canvas)
5. Introductory PowerPoint -- Electricity and Natural Gas Regulation (posted on Canvas).
6. PowerPoint by Sam J. Ervin, IV, former Commissioner of North Carolina Utilities Commission – Energy Regulation in the United States (posted on Canvas).

Class 2: January 27, 2025

Introduction to the FPA and NGA; key legal standards underlying FERC's expansive authority under these laws (undue discrimination, just and reasonable rates, practices affecting rates, market-based rates, required by the public convenience and necessity, filed rate doctrine, confiscatory rates); how the exercise

of such authority may be affected by the “major questions doctrine.” Parallel legal standards and policies under state law.

Class 2 Reading Assignment:

1. Please review these key provisions of the FPA and NGA:
 - a. FPA – sections 201, 203, 205, 206
 - b. NGA – sections 1, 4, 5, 7
2. Eisen et al. Casebook – The Natural Gas Act of 1938, pp. 577-584
3. Precedents Defining Key Legal Standards
 - Eisen et al. 91-101 (*including Public Utilities Comm'n v. Attleboro Steam Co.*)
 - Eisen et al 488-500 (*including discussion of Hope Nat Gas*)
 - Eisen et al. at 541-45 (*including discussion of City of Colton*)
 - *Lockyer v. Dynegy*, 387 F.3d 966 (9th Cir. 2004) (posted on Canvas)
 - *Entergy v La PSC* 539 U.S. 39 (2003) (posted on Canvas)
 - *Montana Consumer Counsel v FERC*, 659 F.3d 910 (9th Cir. 2011) (posted on Canvas)
 - Order No. 697 – Bates White Summary Market Based Pricing (posted on Canvas)
4. Issue Brief: Confiscatory Rates and Constitutional Issues Summary (posted on Canvas)
5. PowerPoint – Key Provisions of the FPA and NGA and Legal Standards and Doctrines Under These Laws (posted on Canvas).
6. Summary of Parallel Provisions of Florida Public Utility Law (posted on Canvas)

Class 3: February 3, 2025

Operational basics of the natural gas and electric power industries and current structures of the industries and their respective markets (including economic rationale, legal basis and events that spurred movement to competitive energy markets and industry restructuring); cost-of-service regulation and market-based regulation.

Class 3 Reading Assignment:

Natural Gas

1. Eisen et al. pp 574-603, 624-630
2. FERC 2024 Energy Markets Primer pp. 2-6 and 16-28 (hereafter “FERC Primer”) (posted on Canvas)
3. Smead – How the Natural Gas Industry Became What It Is Today (posted on Canvas)
4. PowerPoint – Natural Gas Industry Background and Terminology (posted on Canvas)

Electricity:

1. Eisen et al. pp. 683-92, 699-712 (including *New York v. FERC*)
2. FERC Primer pp. 32-37, 44-52
3. U.S. Electricity Grid & Markets (U.S. Environmental Protection Agency) (posted on Canvas)
4. Eisen pp. 769-85 (competitive retail electricity markets)

Class 4: February 10, 2025

Discussion of electric generation technologies and fuels (e.g., natural gas, coal, hydropower, nuclear, wind, solar); integration of intermittent renewable generation (e.g., wind and solar) along with electricity storage resources; interconnection of generation resources. How the Inflation Reduction Act (IRA) has affected clean energy investment and the evolving mix of electricity generation.

Class 4 Reading Assignment:

1. Energy Information Administration (EIA) – Electric Generation by Source (posted on Canvas)
2. Energy Information Administration – Summary of Electric Generation Technologies (posted on Canvas)
3. Analyses and reading materials on the impact of the IRA on clean energy investment will be posted on Canvas
4. Berkeley Lab – 2023 Study on Impact of State Clean Electricity Standards (posted on Canvas)
5. Eisen et al. pp. 989-1008 (electricity storage resources)
6. FERC Staff Fact Sheet – Improvements to Generator Interconnection Procedures and Agreements (posted on Canvas)

7. Utility Dive Article - [‘Explosive’ demand growth puts more than half of North America at risk of blackouts: NERC | Utility Dive-](#)

Class 5: February 17, 2025

Electricity infrastructure, with a focus on the critical role of interstate transmission; the imperative of significant transmission investment; challenges and barriers to installing interstate transmission facilities.

Class 5 Reading Assignment:

1. PowerPoint – The Critical Role of Transmission (posted on Canvas)
2. *Federal Power Commission v. Florida Power & Light Co.*, 404 U.S. 453 (1972) (posted on Canvas)
3. Eisen et al. (Potential Transmission Barriers) pp. 863-891
4. FERC Order No. 1920 on Transmission Planning and Cost Allocation (summary and reading materials about the regulation are posted on Canvas)
5. Congressional Research Service: Transmission Permitting Reform (posted on Canvas)
6. Greenbiz – U.S. Needs a Macrogrid (article posted on Canvas)

Class 6: February 24, 2025

Introduction to Regional Transmission Organizations (RTOs) and RTO markets; integration of carbon pricing and distributed energy resources (demand response, storage, distributed generation, micro grids, and others) in RTO markets; comparison and relative merits of the RTO organized market structure versus Southeast Electricity Market (SEEM) structure.

Class 6 Reading Assignment:

1. PowerPoint – Introduction to Regional Transmission Organizations (RTOs) (posted on Canvas)
2. FERC Primer pp. 66-75
3. U-Tube Video on Locational Marginal Pricing (posted on Canvas)
4. Eisen et al. pp 975-987 (*FERC v. EPSA*), 726-732 (*Hughes v. Talen Energy*) and 1077-1082 (*NARUC v. FERC*)
5. Summary of FERC Order No. 2222 (Distributed Energy Resources) (posted on Canvas)
6. FERC Carbon Pricing Policy Statement (posted on Canvas)

7. Utility Dive Article – DC Circuit Strikes Down FERC Approval of the Southeast Energy Exchange Market (SEEM) (posted on Canvas)
8. E&E News – Western Entities Ponder Regional Grid (posted on Canvas)

Class 7: March 3, 2025

Natural gas: abundance and controversy. Impact of the shale gas revolution and resulting pipeline development; evolution of FERC's policy for certificating new interstate natural gas pipelines; reconsideration of that policy in the context of energy transition and other factors.

Class 7 Reading Assignment:

1. PowerPoint – Natural Gas Abundance and Controversy (posted on Canvas)
2. Eisen et al. pp.664-677 (siting gas pipelines and other infrastructure; environmental challenges; eminent domain)
3. Testimony of Don Santa, February 8, 2018, U.S. Senate Committee on Energy and Natural Resources pp. 1-9 (posted on Canvas)
4. Congressional Research Service Report on FERC Certificate Policy, June 2022, pp. 1-17, 24-27 (posted on Canvas)
5. Shale Gale Turns 10 – Powerful Wind at America's Back (posted on Canvas)
6. *New Jersey Conservation Foundation v. FERC* (DC Cir.) (posted on Canvas)

Class 8: March 10, 2025

FERC's pipeline certificate policy (continued); interplay between FERC's NGA jurisdiction and other permitting laws; consideration of GHG emissions as part of National Environmental Policy Act (NEPA) review and public convenience and necessity determination (including debate over application of major questions doctrine); jurisdiction and policies for considering applications to export natural gas and construct liquefied natural gas (LNG) terminals.

Class 8 Reading Assignment (all posted on Canvas):

1. PowerPoint for NEPA and LNG Class

NEPA Readings

2. Link to Environmental Protection Agency (EPA) NEPA Info
3. CRS Brief on Gas Pipeline Siting
4. *Sierra Club v. FERC* (DC Circuit) (*Sabal Trail*) – read pp. 2-6, read sec. III down to A, and read sec. B pp. 18-27.
5. FERC Fact Sheet on Interim GHG Policy Statement
6. Comm’r Glick MVP Dissent
7. Comm’r Christie Dissent from Updated Certificate Policy

LNG Export Readings

8. CRS Brief on LNG Export Pause
9. Link to CSIS Analysis of LNG Exports

Class 9: March 24, 2025

FERC-state jurisdictional and policy conflicts (e.g., wholesale electric market policy vs. state subsidies and preferences, jurisdiction over demand response, battery storage and other distributed resources; how natural gas pipeline permitting authority assigned to states under federal law affects FERC-approved natural gas pipelines; state challenges to scope of federal eminent domain).

Class 9 Reading Assignment:

1. In earlier classes, we discussed a number of court opinions resolving FERC-state jurisdictional and policy conflicts regarding a range of issues – unbundled transmission, demand response, transmission planning and cost allocation, market-based rates, electricity storage and other issues. In this class, we will review those precedents and how the courts resolved the conflicts.
2. Another vexing FERC-state conflict is regarding the Minimum Offer Pricing Rule (MOPR) in the RTO capacity markets. (MOPR readings posted on Canvas)
3. Matthew Christiansen and Joshua Macey, Long Live the Federal Power Act’s Bright Line, *Harvard Law Review* (posted on Canvas)
4. *Transource Pa. v. Defrank* (U.S. District Ct., Pennsylvania 2023)(pp. 1-9, 12-22) (posted on Canvas)

5. Eisen et al. pp. 742-52 (including *Morgan Stanley v. Snohomish* and importance of contracts)
6. *Penneast Pipeline Co., LLC v. New Jersey* (U.S. Supreme Court) (posted on Canvas)
7. *Constitution Pipeline Company, LLC* (FERC Order, 2019) (posted on Canvas)

Class 10: March 31, 2025

FERC enforcement of FPA prohibition against energy market manipulation; examples of various types of fraudulent and manipulative market behavior that FERC investigates and penalizes; state enforcement and compliance.

Class 10 Reading Assignment:

1. FERC Market Manipulation White Paper (posted on Canvas)
2. Eisen et al. pp. 603-624
3. FERC Primer pp. 28-31 (posted on Canvas)
4. Selected FERC Enforcement Cases (posted on Canvas)
5. FERC Policy Statement on Compliance (posted on Canvas)

Class 11: April 7, 2025

Student group presentations in class on assigned legal and policy topics. Topics will be assigned several weeks in advance.

Class 11 Reading Assignment:

Students will be tasked with conducting the research relevant to their assigned presentation topics.

Class 12: April 14, 2025

Key natural gas issues in a decarbonized future. What will be the role of natural gas, gas pipelines and gas-fired electricity generation? Compare contrasting state approaches to the future role of natural gas. How might decarbonization affect the role of FERC NGA regulation? Jurisdiction over natural gas/hydrogen blends and other gaseous fuels that could have a role in the energy transition.

Class 12 Reading Assignment (all posted on Canvas):

1. Future of Natural Gas PowerPoint
2. McKinsey & Company, The Future of Natural Gas in North America, pp. 12-19
3. NARUC – Potential State Pathways to Facilitate Low-Carbon Fuels (read sections II and III at pp. 7-18)
4. EPA Introduction to Renewable Natural Gas
5. NARUC Certified Natural Gas Primer
6. CBO Carbon Capture and Storage (read pp. 5-6)
7. Regulatory and Policy Responses to Managing NG Downward Spiral
8. Considerations for Transporting a Blended Hydrogen Stream

Class 13: April 21, 2025

Key electricity issues in a decarbonized future. What will be the mix of generation resources, and can reliability be maintained if non-dispatchable renewable generation resources such as wind and solar dominate the generation mix? Will sufficient transmission be built to interconnect renewable generation in remote regions? How will grid decarbonization affect the role of FERC, the states and regulation under the FPA? Is “electrify everything” desirable, practical and achievable? Would electrify everything increase the vulnerability of the energy system to cyber threats? When approving hundreds of billions of dollars of new energy infrastructure, will regulators and policymakers respect environmental justice and energy equity concerns?

Class 13 Reading Assignment (all posted on Canvas):

1. PowerPoint -- Electricity Grid of the Future (posted on Canvas)
2. Brattle Group – The Value of Virtual Power
3. NRDC: [Why We Must Electrify Everything](#) (posted on Canvas)
4. Understanding Cyber Attacks and Available Cybersecurity Technologies (posted on Canvas)
5. Defining Energy Justice: <https://iejusa.org/section-1-defining-energy-justice/> (posted on Canvas)
6. FERC Environmental Justice Policy (posted on Canvas)

Semester Ends