

Three Essentials of the Electric Grid: Legal Essentials SYLLABUS

Vermont Law School Summer Session, Term 1

Three Essentials of the Electric Grid: Legal Essentials (ENG5512)

Class sessions: June 9-12, 9:00am-12:00pm ET (includes 15-min break each day)

Class location: TBD

Instructor:

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Office Hours:

Location: TBD

Time: Mon-Wed, 12:30-1:30pm ET

Course Overview:

This one-credit course is a module in *Three Essentials of the Electric Grid*, a three-part overview of the business, engineering, and law and policy dimensions of the U.S. electricity grid.

With the rise in urgency to address the climate crisis, the United States needs to sharply reduce greenhouse gas emissions and transition to a carbon-free economy. But not everyone agrees with the urgency of this goal or that it can be achieved while maintaining an affordable and reliable energy grid. This legal essentials module will examine the law of the electric power sector and how it has been used to advocate around climate policies. Through classroom discussion and exercises, this course will: use real case studies related to “hot” issues for today’s electricity regulators, stakeholders, and market participants; and explore substantive policy and skills-based knowledge, demonstrating how practitioners in the field advance energy policies.

The course will include four three-hour sessions, Monday, June 9 – Thursday, June 12, from 9am-12pm ET.

There will be a short answer, take-home final. It will be available after class is over on Thursday, June 12 on Canvas and due by Sunday, June 15 at 5:00 pm ET on Canvas.

Course Objectives:

To have students understand:

- At a basic level, bedrock federal laws that shape the U.S. electricity grid and the key decisionmakers influencing policy;
- Key legal and policy challenges facing regulators and stakeholders in today's electricity markets, particularly given the need to transition to a carbon-free power sector;
- The varying perspectives and concerns of electricity sector stakeholders and market participants; and
- An overview of the advocacy skills necessary for these stakeholders to navigate and influence electricity regulation and markets.

Requirements and Grading:

Class sessions will be organized around lectures, discussion, and exercises. Class participation is 40% of the grade, attendance is 30% of the grade, and a take home final exam is 30% of the grade. Preparation for, attendance at, and active, collegial participation in every class session is required. *Please read the assigned materials in advance of that class – bonus materials are provided for your interest but are not required reading.*

Class 1: Monday, June 9

Setting the Stage: In this class, we will examine U.S. power trends. We also will introduce the basics of energy law and how it has evolved in the last century. We will focus on the importance of data in legal and policy advocacy.

Assigned Materials:

- *Electricity Regulation in the US* – Intro, and Chapters 1-3 (pp. 1-24) (Purpose of Utility Regulation; A Brief History of Regulation; Industry Structure) <https://www.raponline.org/wp-content/uploads/2023/09/rap-lazar-electricity-regulation-US-june-2016.pdf>
- *Article: Three Myths About Renewable Energy and the Grid, Debunked* (Amory Lovins & MV Ramana, Dec 9, 2021) <https://e360.yale.edu/features/three-myths-about-renewable-energy-and-the-grid-debunked>
- *Podcast: The energy transition's 5 supervillains and 5 superheroes* (Volts, May 1, 2024), <https://www.volts.wtf/p/the-energy-transitions-5-supervillains>
- *Podcast: Transforming America's Power System* (Columbia Energy Exchange, Dec. 17, 2024) <https://www.energypolicy.columbia.edu/transforming-americas-power-system/>
- *Article: 2025 Renewable Energy Outlook: Full speed ahead as second Trump administration begins* (Diana DiGangi, Utility Dive, Jan. 21, 2025) <https://www.utilitydive.com/news/2025-outlook-renewable-energy-inflation-reduction-act-trump-administration/737234/>
- *Article: 9 US electric power sector issues to watch in 2025* (Robert Walton, Ethan Howland, Diana DiGangi, Larry Pearl, Brian Martucci, Utility Dive, Jan. 8, 2025) <https://www.utilitydive.com/news/electric-power-sector-issues-to-watch-prices-demand-reliability-renewables-nuclear-vpp-transmission/736492/>
- *Article: The problem with decarbonization tunnel vision* (Peter Sutoris, The Bulletin, Apr. 18, 2024) <https://thebulletin.org/2024/04/the-problem-with-decarbonization-tunnel-vision>.

Reference/Bonus Content: (not required reading)

- 2023 Outlook: US power sector trends to watch (Utility Dive, Jan. 13, 2023), <https://www.utilitydive.com/news/2023-us-power-sector-trends-renewables-reliability-FERC-cybersecurity-hydrogen-nuclear-storage-EVs/640307/>
- *Story Map: Race to 100% Clean* (Natural Resources Defense Council, updated April 14, 2022), <https://www.nrdc.org/resources/race-100-clean>
- *Podcast: A 90% Clean Grid Can Be Achieved Quickly. What's Holding It Back?* (The Energy Gang, June 19, 2020, Katherine Hamilton, Jigar Shah and Stephen Lacey), <https://www.greentechmedia.com/articles/read/a-90-clean-grid-is-possible-fast-whats-holding-it-back>
- *Podcast: Stunning new data on the economics of US coal vs. renewables* (The Carbon Copy, Feb. 22, 2023), <https://www.canarymedia.com/podcasts/the-carbon-copy/stunning-new-us-data-on-coal-vs-renewables>
- *Podcast: Inside the 2024 World Energy Outlook* (Columbia Energy Exchange, Nov. 19, 2024) <https://www.energypolicy.columbia.edu/inside-the-2024-world-energy-outlook/>
- *Podcast: AI Power Demand and US Energy Policy* (Columbia Energy Exchange, Feb. 25, 2025) <https://www.energypolicy.columbia.edu/ai-power-demand-and-u-s-energy-policy/>
- *Podcast: The data center boom: 'All the cheap power is gone'* (Open Circuit, Feb. 21, 2025) <https://www.latitudemedia.com/news/open-circuit-the-data-center-boom-all-the-cheap-power-is-gone/>
- *Article: As Use of A.I. Soars, So Does the Energy and Water It Requires* (David Berreby, Feb. 6, 2024) <https://e360.yale.edu/features/artificial-intelligence-climate-energy-emissions>
- *Article: Offshore wind is at a crossroads. Here's what you need to know.* (EENews EnergyWire, Nov 2023) <https://www.eenews.net/articles/offshore-wind-is-at-a-crossroads-heres-what-you-need-to-know/>
- *Article: Fossil Fuel Racism in the United States* (Timothy Q. Donaghy, Noel Healy, Charles Y. Jiang, Colette Pichon Battle, June 2023), <https://www.sciencedirect.com/science/article/pii/S2214629623001640#:~:text=In%20the%20U.S.%20the%20public,the%20fossil%2Dfuel%20based%20economy>

Class 2: Tuesday, June 10

FERC and the Transmission Journey: This class will introduce the Federal Energy Regulatory Commission and the basic legal standards of the Federal Power Act. We will dive in on FERC's recent actions on transmission and interconnection. We will focus on skills for advocating before a federal agency.

Assigned Materials:

- *Electricity Regulation in the US* – Chapters 13 (pp. 93-99) (Transmission and Transmission Regulation) <https://www.raponline.org/wp-content/uploads/2023/09/rap-lazar-electricity-regulation-US-june-2016.pdf>
- *FERC Energy Primer 2024* – the following parts of Chapter 2 (Wholesale Electricity Markets): pp. 34-46, “Transmission” p. 52, “Transmission Service” and “Transmission Planning” pp. 55-56, “RTO and ISO Markets” pp. 66-68 https://www.ferc.gov/sites/default/files/2024-01/24_Energy-Markets-Primer_0117_DIGITAL_0.pdf
- *Report: Queued up...But in need of Transmission* (DOE, Feb. 2022) (now available on Canvas)
- *Podcast: Transmission week: why we need more big power lines* (Volts, Jan. 25, 2021) <https://www.volts.wtf/p/transmission-week-why-we-need-more>
- *Podcast: What's the deal with interconnection queues?* (Volts, Aug. 9, 2023) <https://www.volts.wtf/p/whats-the-deal-with-interconnection>
- *Podcast: FERC's New Approach to Improving Transmission Investment* (CleanLaw, June 11, 2024) <https://eelp.law.harvard.edu/cleanlaw-fercs-new-approach-to-improving-transmission-investment/>
- Group 1: Will be assigned latest at Class 1
 - Order 1920, Paragraphs 1, 14-19, 85-139, <https://www.ferc.gov/media/e1-rm21-17-000>
- Group 2: Will be assigned latest at Class 1
 - Order 2023, Paragraphs 1-4, 27-60 <https://www.ferc.gov/media/e-1-order-2023-rm22-14-000>
- Be prepared to present with your group:
 - A basic summary of the Order
 - What are the reasons the Commission gave for needing reform?
 - Which parties generally agree with the need for reform? Which parties disagree?

- What reforms is the Commission requiring? (Feel free to find summaries online to help you answer this)
- Did all the Commissioners concur? Did any dissent? (hint – Commissioner statements are included at the end of the Orders)
- What additional reasoning did Commissioners provide?
- Bonus – can you figure out what has happened procedurally since the Order was published?

Reference/Bonus Content: (not required reading)

- *Report: The Value of Transmission During Winter Storm Elliot* (Grid Strategies, Feb 2023) <https://acore.org/wp-content/uploads/2023/02/The-Value-of-Transmission-During-Winter-Storm-Elliott-ACORE.pdf>
- *Podcast: FERC's new rule and other exciting transmission news* (Volts, May 24, 2024) <https://www.volts.wtf/p/fercs-new-rule-and-other-exciting>
- *Podcast: FERC is about to make some very important decisions about transmission* (Volts, Nov. 2023) https://www.volts.wtf/p/ferc-is-about-to-make-some-very-important?utm_source=publication-search
- *Podcast: Inside FERC's big transmission revamp* (Politico Energy, May 14, 2024) <https://politico-energy.simplecast.com/episodes/heres-what-to-know-about-fercs-historic-transmission-rules>
- *Article: Taking Charge: Commissioner Clements on FERC's 'make or break' role amid the energy transition* (Catherine Morehouse, Utility Dive, March 16, 2021) <https://www.utilitydive.com/news/taking-charge-commissioner-clements-on-fercs-make-or-break-role-amid-th/596736/>
- *Paper: Rethinking Grid Governance for the Climate Change Era* (Shelley Welton, Mar. 2020) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3564682

Class 3: Wednesday, June 11

Natural Gas and Nuclear Power: In this class, we will examine the role of the traditional energy resources of gas and nuclear power. We will review the legal standards that the Federal Energy Regulatory Commission must apply to gas resources under the Natural Gas Act and the standards that the Nuclear Regulatory Commission must apply to nuclear resources under the Atomic Energy Act. We will dive into the shifting policy considerations of whether to buildout and maintain these energy resources when considering affordability, reliability,

and environmental impacts. We will focus on skills for litigating before a federal court of appeals.

Assigned Materials:

- *FERC Energy Primer 2024* – Chapters 1 & 3, pp. 1-31, 100-108 (Wholesale Natural Gas Markets, Gas-Electric interdependency)
https://www.ferc.gov/sites/default/files/2024-01/24_Energy-Markets-Primer_0117_DIGITAL_0.pdf
- *Evaluating Project Need for Natural Gas Pipelines in an Age of Climate Change: A Spotlight on FERC and the Courts*, Alexandra B. Klass, 39 *Yal J. on Reg.* 658 (2022)
- *New Jersey Conservation Found. v. FERC*, 111 F.4th 42 (D.C. Cir. 2024)
- *Citizens Action Coal. of Indiana, Inc. v. FERC*, 125 F.4th 229 (D.C. Cir. 2025)
- *Article: The Controversial Future of Nuclear Power in the U.S.* (National Geographic, May 4, 2021, Lois Parshley),
<https://www.nationalgeographic.com/environment/article/nuclear-plants-are-closing-in-the-us-should-we-build-more>
- *Article: US 'nuclear renaissance' faces high capital costs, uncertain federal policy support: ICF* (Brian Martucci, Utility Dive, Mar. 31, 2025)
<https://www.utilitydive.com/news/nuclear-renaissance-capex-cost-smr-icf/743956/>

Reference/Bonus Content: (not required reading)

- *How Gas Plants Fail and Lead to Power Outages in Extreme Winter Weather* (Union of Concerned Scientists, Dec. 14, 2023)
<https://blog.ucsusa.org/paul-arbaje/how-gas-plants-fail-and-lead-to-power-outages-in-extreme-winter-weather/#:~:text=And%20while%20the%20areas%20affected,those%20storms%20were%20very%20similar.>
- *The Nuclear Fuel Cycle, Global Security, and Climate Change: Weighing the Costs and Benefits of Nuclear Power Expansion*, Christopher Paine (Mar. 1, 2010)
- *Small Modular Reactors: More Questions Than Answers*, Bemnet Alemayehu and Matthew McKinzie, NRDC (Dec. 12, 2023)
<https://www.nrdc.org/resources/small-modular-reactors-more-questions-answers>

- *NEPA Litigation over Large Energy and Transport Infrastructure Projects*, Michael Bennon and Devon Wilson, Environmental Law Institute (2023)

Class 4: Thursday, June 12

Executive and Legislative Energy Policy: In this class, we will review the infrastructure, climate, and energy policies of the prior and existing Congresses and executive administrations. We will touch on climate and clean energy funding in the form of the Infrastructure Investment and Jobs Act and the Inflation Reduction Act, dive into the saga of attempts to regulate (or not) CO₂ from electric power plants, and review Executive Orders. We will focus on skills for legislative advocacy.

Assigned Materials:

- *Podcast: America is Finally Doing Something Big on Climate* (The Carbon Copy, Aug. 10, 2022), <https://www.canarymedia.com/podcasts/the-carbon-copy/america-is-finally-doing-something-big-on-climate>
- *Video: The Biggest Climate Bill of Your Life - But What does it DO!?* (vlogbrothers, Aug. 12, 2022) <https://www.youtube.com/watch?v=qw5zzrOpo2s>
- *Podcast: How the Biden investments are changing America* (Volts, Sept. 18, 2024) <https://www.volts.wtf/p/how-the-biden-investments-are-changing>
- *EPA's Endangerment Finding: The Legal and Scientific Foundation for Climate Change* (NRDC, May 2017) <https://www.nrdc.org/sites/default/files/epa-endangerment-finding-fs.pdf>
- *Supreme Court Limits E.P.A.'s Ability to Restrict Power Plant Emissions* (New York Times, June 30, 2022, Adam Liptak), <https://www.nytimes.com/2022/06/30/us/epa-carbon-emissions-scotus.html?smid=url-share> (also posted to Canvas for those without a NYT digital subscription)
- *Podcast: What you need to know about the new EPA power plant standards* (Volts, May 6, 2024) <https://www.volts.wtf/p/what-you-need-to-know-about-the-new>
- *Article: The President Targets EPA's Authority to Address Climate Change – Will He Succeed?* (Jody Freeman and Carrie Jenks, Harvard Climate Blog, Jan. 28, 2025) <https://salatainstitute.harvard.edu/the-president-targets-epas-authority-to-address-climate-change-will-he-succeed/>

- Declaring a National Energy Emergency (Presidential Action, Jan. 20, 2025) <https://www.whitehouse.gov/presidential-actions/2025/01/declaring-a-national-energy-emergency/>
- Unleashing American Energy (Presidential Action, Jan. 20, 2025) <https://www.whitehouse.gov/presidential-actions/2025/01/unleashing-american-energy/>

Reference/Bonus Content: (not required reading)

- *The Bipartisan Infrastructure Package: What it Means for Energy and Climate* (Beveridge & Diamond, Nov 15, 2021), <https://www.bdlaw.com/publications/the-bipartisan-infrastructure-package-what-it-means-for-energy-and-climate/>
- *A federal court just struck down Trump's attempt to make power plants even dirtier* (Umair Irfan, Vox, Jan 19, 2021) <https://www.vox.com/2021/1/19/22239074/affordable-clean-energy-rule-vacated-trump-court-climate-change-obama-biden>
- *Trump's Clean Power Plan Replacement Is WORSE Than Nothing* (Lissa Lynch, NRDC, Aug. 20, 2018) <https://www.nrdc.org/bio/lissa-lynch/trumps-clean-power-plan-replacement-worse-nothing>
- [EPA's Endangerment Finding: The Legal and Scientific Foundation for Climate Action \(PDF\) \(nrdc.org\)](https://www.nrdc.org/bio/lissa-lynch/trumps-clean-power-plan-replacement-worse-nothing)
- Podcast: *The Chevron Doctrine: what it is and why it matters that the Supreme Court might kill it* (Volts, Jan 2024) <https://www.volts.wtf/p/the-chevron-doctrine-what-it-is-and>
- *Supreme Court likely to discard Chevron* (Amy Howe, SCOTUSblog, Jan 17, 2024) <https://www.scotusblog.com/2024/01/supreme-court-likely-to-discard-chevron/>
- *Blog: Trumps Attempts to Bring Back Coal Will Fail* (Christy Walsh, NRDC, Mar. 31, 2025) <https://www.nrdc.org/bio/christy-walsh/trumps-attempts-bring-back-coal-will-fail>
- Podcast: *Trump's Bold Reversal on Energy and Climate Policy: 'It's a Lot'* (CleanLaw, Feb. 13, 2025) <https://eelp.law.harvard.edu/cleanlaw-trumps-bold-reversal-on-energy-and-climate-policy-its-a-lot/>
- *Article: 2025 FERC, DOE Outlook: Surging demand growth to drive power-sector agenda* (Utility Dive, Jan. 16, 2025)

<https://www.utilitydive.com/news/ferc-doe-epa-trump-2025-outlook-electricity-demand-growth/737385/>

- Politico Energy quick-take podcasts:
 - 25 min: *Why Trump's once (and future?) EPA chief thinks Biden's climate rules could be in trouble* (May 20, 2024) <https://politico-energy.simplecast.com/episodes/former-epa-chief-wheeler-on-what-a-second-trump-administration-looks-like>
 - 7 min: *How the oil industry is prepping for a possible Trump return* (May 10, 2024) <https://politico-energy.simplecast.com/episodes/inside-the-oil-industrys-day-1-plan-for-trumps-return>
 - 8 min: *Supreme Court could put Biden's climate regulations at risk* (May 3, 2023), <https://politico-energy.simplecast.com/episodes/supreme-courts-move-puts-biden-climate-regulations-at-risk>
 - 9 min: *Inside Biden's crackdown on power plant emissions* (May 12, 2023), <https://politico-energy.simplecast.com/episodes/a-guide-to-bidens-new-power-plant-rule>
 - 8 min: *How Biden's latest climate rule could impact the power grid* (May 15, 2023), <https://politico-energy.simplecast.com/episodes/biden-went-big-on-power-plants-is-the-us-power-grid-ready>