

RENEWABLE ENERGY POLICY AT THE STATE & LOCAL LEVEL

PUBPOL 750.304

WINTER TERM 2019

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Class: Monday & Wednesday 11:30am-12:50pm, Weill Hall Room 1220
Office Hours: Monday 1-2pm, Tuesday 4-5pm, and by appointment

INTRODUCTION AND COURSE OBJECTIVES

As national concern for addressing global warming grows, more and more Americans are looking for governmental action to speed a transition to low-carbon energy sources. Most of the focus has been on federal action or—in the Trump era—reversal of prior federal action. Furthermore, the lion's share of attention has been paid to a handful of policies that either put a price on carbon (e.g., carbon tax or cap-and-trade) or require utilities to meet renewable energy or improved energy efficiency targets. Below the radar, though, are state level policy choices—on tax policy, siting authority delegation to local governments, infrastructure investment, use of public lands, and even conflict of interest law—that can serve to facilitate or hinder an energy transition. Taken individually, these policies may seem innocuous, but collectively they can serve to provide preferred status to some energy sources and impact the performance of other policies. As a result, some states have opted to play a stealth game, relying on these lower-profile policies to facilitate an energy transition even in states where talking about climate change is politically untenable. Meanwhile in other states, these lower-profile policies may—knowingly or unknowingly—undermine achievement of even more explicit state climate policies including renewable portfolio standards.

This course will consider both the content and consequences of this complex web of policies shaping the energy mix, paying particular attention to the treatment of renewable energy sources compared to those of traditional fossil fuel based sources. It will also explore the diverse stakeholders who shape these policies and the motivations behind their positions—from economic development, to energy independence, to landowners' rights. While this course will focus on U.S. state-level policy, the lessons learned may be applied at the federal level, and beyond the U.S.

ASSIGNMENTS

Though grades will be based on eight different assignments (see table), all of these assignments center around gaining expertise on policies effecting renewable energy deployment in a single state.

The primary product will be a research paper / case study that includes:

- Background on the existing energy mix and renewable energy potential, a content analysis of newspaper articles assessing local narratives about the energy transition, and a literature review of any existing energy policy research from the state, drawing from both peer-reviewed and grey-literature sources.
- An analysis of the policy landscape including—but not limited to—the policy areas we address in class: explicit climate policy, tax policy, siting authority, use of public lands, infrastructure investment, public utility commission policies, and policies effecting distributed generation. This analysis will include both existing and proposed policies, as well as the politics shaping those policies.

- An assessment of how those policies collectively facilitate or hinder renewable energy deployment, and where there might be opportunities for a more harmonious state renewable energy policy.

Drafts of sections of the research paper are due periodically to allow for an opportunity for instructor feedback and revision (each worth 15% of the final grade). Ninety percent of the grade will be based on substantive content and the remaining ten percent on stylistic clarity and quality.

Because of the broad scope of this case study, students will be assigned to small (3 person) teams to be able to share the work of pulling together background information, divide up policy areas, and jointly debate/discuss how these policies work together. The background section should be written as a group, and the final paper should incorporate the work of all team members, but the individual policy sections should be written individually. Grades for the two group assignments will be assessed based on each individual's contribution informed by self- and group-evaluations.

Additionally, each student will be expected to conduct at least one phone interview with a policy expert in the case study state to get clarification on any policy issues with which they are uncertain and to vet that they are correctly understanding the policy landscape. Draft interview questions should be submitted before the interview (worth 5% of the final grade) and a summary of the interview should be submitted after the interview (worth another 5%).

Furthermore, each student should independently choose a legislative bill or PUC policy under consideration in the state and write both:

- a public-focused op-ed (not to exceed 750 words) suitable for publication in a newspaper in that state
- a policy-maker focused written testimony (not to exceed 2500 words) to the applicable committee/public body considering that bill/policy

Grades for this assignment will be assessed based not just on demonstrating an understanding of the policy and how it might affect renewable energy deployment, but appropriately tailoring your writing style and message to your target audience. This assignment will be worth 25% of your final grade.

The remaining 5% of the grade will be based upon your thoughtful participation in the research conference that will be held during the final exam period. During this event, you will make a short presentation of your top-level research findings and then engage in a panel discussion with fellow classmates.

<u>Assignment</u>	<u>Proportion of Grade</u>	<u>Due Date</u>
Research Paper: Background, 1 st (group ; 3000 words + figures)	15%	2/6
Research Paper: Policy landscape: 1 st draft (solo ; 3-5 pages)	15%	2/27
Interview: questions (solo)	5%	2/27
Research Paper: Policy landscape + analysis: 2 nd draft (solo ; 5-8 pages)	15%	3/27
Interview: Reflection (solo)	5%	4/10
Written testimony & op-ed (solo)	25%	4/17
Research Paper: Final background + policy landscape + analysis (group ; 20-25 pages)	15%	4/29
Participation in closing conference (solo)	5%	4/29

REQUIRED TEXTBOOKS

There are no required textbooks for this class. Course readings will all be available through Canvas.

EXPECTATIONS

I believe the best learning environment is a result of the efforts of both students and instructors.

The responsibilities of the student include:

1. coming to class on time and being prepared to participate
2. respecting the views and learning needs of other students
3. consulting with the Instructor about any problems in the course
4. adhering to high standards of academic conduct

The responsibilities of the Instructor include:

1. coming to class prepared to facilitate discussion and learning
2. giving students guidance about how to improve their performance
3. respecting the views and learning needs of all students
4. working with students to resolve any problems in the course
5. responding to email within 24 hours; email sent after 4pm on Friday will be returned by Monday at noon

If you believe you need an accommodation for a disability, please let me know at your earliest convenience. Some aspects of this course may be modified to facilitate your participation and progress. As soon as you make me aware of your needs, we can work with the Office of Services for Students with Disabilities to help us determine appropriate accommodations. I will treat any information you provide as private and confidential.

SCHEDULE

January 9: Where is the U.S. Energy Policy detailed?

What role has the federal government historically played in setting energy policy, and how has that changed—or not—as the impacts of climate change have become known? What role do states and local governments play in setting energy policy?

January 14 & 16: The Energy Transition

Transitioning from an electric grid powered by fossil fuels to one powered by renewables poses a number of challenges and opportunities. On Monday, we'll talk about the technical and economic aspects of the transition, focusing in particular on how the transition impacts the electric grid and electric reliability. On Wednesday, we'll focus on the social aspects of the transition: the shifting physical and geographical footprint of power plants and what it means for communities that currently host coal or natural gas power plants, as well as those that will be asked to host wind or solar farms.

Heinberg, Richard and Fridley, David (2016). [*Our Renewable Future: Laying the Path for 100% Clean Energy*](#). Ch.3.

Zichella, Carl and Hladik, Johnathan. [*Finding a Home for Renewable Energy and Transmission*](#). America's Power Plan.

Gahran, Amy (2018). [*State of the Electric Utility*](#). Utility Dive.

Eller & Hardy. (2017). [“Is wind power saving rural Iowa or wrecking it?”](#) *Des Moines Register*
Jackson (2018). [“Sheer wind, sheared communities”](#) *Michigan Farm News*
Mcfetridge (2018). [“New rebellion against wind energy stalls projects”](#) *Chron*
Bryce (2018). [“Wind power is an attack on rural America”](#) *Los Angeles Times*

January 21: NO CLASS; MLK DAY

January 23: Researching State Policy

Ford School alum Kristy Hartman serves as Energy Program Manager at the National Conference of State Legislators (NCSL), a bipartisan organization that helps to improve the quality and effectiveness of state legislatures. She’ll come to class to both share existing NCSL research on state energy policy, but also provide tips on how to get a lay-of-the-land of the policy environment in each state, from tracking individual pieces of legislation to figuring out who to call to ask questions.

January 28 & 30: State Climate Policies

Most of the academic attention on state climate policy has been on three policies: carbon taxes, cap-and-trade, and renewable portfolio standards. What motivates some states—but not others—to take unilateral action? How do state-level politics impact the policies themselves? Do you mandate or incentivize? Tax or cap-and-trade? Go it alone or collaborate with neighbors? On Monday, we’ll discuss carbon taxation and cap-and-trade. On Wednesday, renewable portfolio standards.

Marron et al (2015). [Taxing Carbon: What, Why, and How](#). Tax Policy Center.

Rabe, Barry (2018). [The economics- and politics- of carbon pricing](#). The Brookings Institution

Rader, Nancy (2000). [The Hazards of Implementing Renewables Portfolio Standards](#). Energy & Environment.

Winston (2018). [“Michigan deal shows trend of ballot measures to boost renewable generation”](#)
S&P Global Platts

Trabish (2018). [“Modernizing renewables mandates is no longer about the megawatts”](#)
UtilityDive

Yingling (2018). [“Utilities challenge need and wisdom of state renewable energy ballot initiatives”](#)
DailyEnergyInsider

[Evolving the RPS: Implementing a Clean Peak Standard](#) (2018). Strategen Consulting

February 4: Municipal Climate Pledges

Today, we’ll look specifically at municipal climate pledges. What prompts cities to make these pledges? What are the prospects for meeting them? How does utility structure—in particular, whether there is a municipal electric utility—factor into opportunities for achieving these climate goals?

Rhodes (2018). “What Does 100% Renewable Energy Really Mean?” *Forbes*

February 6: Income Tax Credits

Much attention has been given to the federal Production Tax Credit (for wind) and the Investment Tax Credit (for solar), and the role that this tax policy has historically played in “subsidizing” renewables development. Some states, too, provide tax incentives for wind energy development. How important are these?

Sherlock, Molly (2015). [The Renewable Electricity Production Tax Credit: In Brief](#). Congressional Research Service.

A collection of newspaper articles discussing Income Tax Credit debate in Oklahoma

February 11 & 13: Property Tax Structure

Here is where we’ll start to talk about the policies that rarely mention climate or renewable energy, but are no less influential in facilitating or hindering renewables deployment. Nearly every state assesses a property tax on industrial facilities—including renewable energy projects. The rationale behind these taxes may be to raise government revenues but also to compensate local governments—who are often the beneficiaries of property taxes—for negative externalities. On Monday we’ll talk about different ways that property taxes are structured—from a typical depreciation schedule to a back-loaded or levelized schedule—and what implications this has on developer decisions and on host communities. On Wednesday, we’ll dig more deeply into negotiated Payments in Lieu of Taxes and direct donations to local communities.

Battel (2016). [“Commissioners consider wind tax income for arena”](#) *Huron Daily Tribune*

Baer (2017). [“Wind Energy Generates Big Benefits for Iowa Counties”](#) *Iowa Environmental Council*

Kirk (2018). [“Turbine debate keeps spinning”](#) *Pharos-Tribune*

McGraw & Hennessy/Flatland (2017). [“Rush to attract wind turbine investors leaves Kansas school districts shortchanged”](#) *Investigate Midwest*

Balaskovitz (2016). [“Advocates say wind, solar at a tax disadvantage in Michigan”](#) *Energy News Network*

Jossi (2018). [“Windfall: Minnesota counties use wind tax money for roads, tax relief”](#) *Energy News Network*

Jacobs (2017). [“Lawmakers debate future of wind energy”](#) *The Bismarck Tribune*

Kenmore (2018). [“Hopkinton residents receive letter from wind company offering payments on electric bills”](#) *Watertown Daily Times*

Wilmoth (2018). [“Wind energy advocates rally to support industry in Oklahoma”](#) *NewsOK*

February 18 & 20: NIMBYs and YIMBYs

To kick-off talking about siting renewable energy projects, we’ll consider why community members would—or would not—want to welcome renewable energy development. We’ll look at the research around NIMBY (not in my backyard) and YIMBY (yes in my backyard) responses, and which types of residents tend to be most supportive of renewable energy projects. We’ll consider the role of place attachment, landscape characteristics, views about property rights, and renewable energy business models in shaping responses to specific projects.

Deaton & Agnew (2018). [“With wind farms, bias is in the eye of the beholder”](#) *Popular Science*

Sutton (2017). [“I am proud to live by a wind turbine”](#) *Des Moines Register*

Schively, Carissa (2007). [Understanding the NIMBY and LULU Phenomena: Reassessing Our Knowledge Base and Informing Future Research](#). Journal of Planning Literature.

February 25 & 27: Zoning Considerations

This week we'll start to dig into how zoning regulations impact the feasibility of siting a renewable energy project in a community. On Monday, we'll discuss the sorts of regulations that are commonly placed on wind and solar plants sited on private property, aiming to better understand the rationale for such regulations and the practical implications that they have on project feasibility. On Wednesday, we'll delve into the pros and cons of setting these regulations at the state versus local level. In particular, we'll discuss how state-level siting isn't necessarily the antidote to NIMBYism.

Brower et al (2012). *Wind Resource Assessment- A Practical Guide to Developing a Wind Project*. Wiley.

Information Guide: Wind Energy Ordinances. Center for Rural Affairs.

Howell (2018). "[Company helps with wind rights](#)" *Fairmont Sentinel*

Miley (2017). "[Should Indiana have statewide zoning for wind turbines?](#)" *Tribune Star*

Battel (2018). "[Legal problems surface with Huron's master plan](#)" *Huron Daily Tribune*

Henry (2018). "[A look at wind power's history in Ohio](#)" *The Blade*

Rynne et al (2011). *Planning for Wind Energy*. American Planning Association.

Norton (2018). "[Township voters to decide ballot proposals on planning commissions](#)" *The Morning Sun*

March 4 & 6: SPRING BREAK – NO CLASS. Enjoy!

March 11 & 13: Local Zoning Considerations

This week, we'll delve into two additional considerations that often come into play when local governments are given authority for regulating siting of wind energy projects: conflict of interest and local ballot referenda. On Monday, Valerie Brader, a practicing attorney and former head of the Michigan Agency for Energy, will talk about what happens when local government board members also hold wind energy leases. Can or should they be allowed to set zoning regulations governing wind development, or vote on specific projects? On Wednesday, we'll discuss under what conditions wind projects can be put before voters, and we'll also consider the extent to which energy projects have political ramifications for local officials.

Le Coz & Sherman (2017). "[Conflicts of Interest Abound in Wind Farm Proposals](#)" *GateHouse Media*

Vissers (2018). "[Wind farm issue blows change in L'Anse Township Board](#)" *The Daily Mining Gazette*

Stokes, Leah (2015). [Electoral Backlash against Climate Policy: A Natural Experiment on Retrospective Voting and Local Resistance to Public Policy](#). American Journal of Political Science.

Battel (2017). "[Voters say no to more wind development](#)" *Huron Daily Tribune*

Henry (2011). "[Turbines in Michigan spur recall petitions](#)" *The Blade*

Drier and Battel (2018). "[Township sees more recall action](#)" *Huron Daily Tribune*

March 18 & 20: Siting on or near Public Lands

While for the last few weeks we have focused on private lands, this week we look at public lands. Roughly 35% of the land area in the U.S. is owned by the state or federal government, though this varies greatly from state to state. Furthermore, the goals and purposes of these lands can vary, from landscapes set aside as wilderness or public parks, to those actively managed for resource production, to those used by the military or other agencies. What are the opportunities and challenges of siting renewable energy projects on public lands? How does siting on public lands change who is considered “affected” by the project? To what extent does being proximate to public lands effect projects on private lands?

- Berry, Alison (2013). [Leasing Renewable Energy on State Trust Lands in the Intermountain West](#). Lincoln Institute of Land Policy.
- Apostol et al (2016). *The Renewable Energy Landscape: Preserving scenic values in our sustainable future*. Routledge.
- Balaskovitz (2018). [“In Michigan, unwanted properties could see new life with solar projects”](#) Energy News Network
- DeMarco (2018). [“Air Force Training Interferes With Wind Farm Plans”](#) KUNM
- Jackson (2018). [“Game commission declares moratorium on wind turbines.”](#) windAction
- Pearl (2018). [“Trump Administration advances 500MW solar project”](#) UtilityDive

March 25 & 27: Farmland Preservation and Right to Farm Laws

Protection of farmland and farm livelihoods has been a concern in the U.S. since the 1970s. Every state has a right to farm law and all also have at least one policy aimed at farmland preservation, most of which date back to that era. We’ll consider how these policies are being interpreted or amended to accommodate—or not—renewable energy, and discuss how wind and solar have differential impacts on the varying goals of farmland preservation. Is it possible to balance competing clean energy and rural land use policy objectives?

- Spencer (2014). [“Bill Proposes Adding Wind Industry to ‘Right to Farm’ Act”](#) Michigan Capitol Confidential
- Grout, Travis and Ifft, Jennifer (2018). [Approaches to Balancing Solar Expansion and Farmland Preservation: A Comparison across Selected States](#).
- Lydersen (2018). [“Illinois bills for solar on farmland await governor’s signature”](#) Energy News Network
- Fischenich (2018). [“Power plants and prairie plants”](#) Mankato Free Press

April 1: Transmission Investment

Today we’ll discuss policies that have extended or expanded the transmission grid to connect the best (rural) wind- or sun-resource areas to urban load centers. We’ll also discuss the rules governing the siting of transmission projects and public reaction to that transmission infrastructure. What happens, though, when the renewable energy projects that would connect to the expanded grid are contested, or alternately, when there is opposition for building transmission?

- Brannstrom and Fry (2017). *New geographies of the Texas energy revolution*. The Routledge Research Companion to Energy Geographies, Chapter 1.

[“Editorial: Missouri’s rural way of life threatened by more than wind power”](#) (2018). *St. Louis Post-Dispatch*
Sivaram, Varun and Kann, Shayle (2016). [Solar power needs a more ambitious cost target](#).
Nature Energy
Perryman (2018). [“PERRYMAN: Texas wind will take on added importance in the future”](#) *OA Online*

April 3: Energy Storage

One of the key challenges in moving to very high levels of renewable energy penetration is that solar and wind aren’t dispatchable—you can’t “switch them on” to meet spikes or peaks in demand. Today we’ll look at different ways that renewable energy can be stored to buffer spikes and peaks—from battery banks, to electric vehicles, to pumped storage—and policies that incentivize or require deployment of energy storage.

Maloney (2018). [“As second wave of state storage targets builds, utilities propose new projects”](#)
UtilityDive
[Issue Brief: A Survey of State Policies to Support Utility-Scale and Distributed-Energy Storage](#)
(2014). National Renewable Energy Laboratory.
Olinsky-Paul (2016). [“Energy Storage State Policy Update”](#) *Clean Energy States Alliance*.
Walton (2018). [“NV Energy questions need for Nevada storage target”](#) *UtilityDive*

April 8 & 10: Public Utilities Commission Policy

This week we’ll discuss the role of Public Utilities Commission policies and rulings in facilitating or hindering renewable energy development. We’ll consider how some PUCs are using the federal Public Utility Regulatory Policies Act (PURPA) from 1978 to drive medium-scale wind and solar plants. We’ll also consider how Integrated Resource Planning can provide a more level playing field for renewable energy—and energy efficiency/energy waste reduction, too.

Kavulla, Travis and Murphy, Jennifer (2018). [Aligning PURPA with the Modern Energy Landscape](#).
National Association of Regulatory Utility Commissioners.
Stanfield (2018). [“Minnesota overhauls interconnection standards to streamline clean energy”](#)
UtilityDive
Bade (2018). [“States, greens face off over PURPA implementation at FERC”](#) *UtilityDive*

April 15 & 17: Distributed generation

After focusing for most of the class on utility-scale renewable energy power plants, this week we’ll turn our attention to smaller-scale systems, especially roof-top solar. On Monday, we’ll talk about net-energy metering (NEM) policies, and specifically what elements different constituencies (from homeowners to utilities) support or oppose. On Wednesday, we’ll focus on taxation of small-scale systems and zoning, including solar access ordinances.

Trabish (2018). [“Solar has transformed into solar-plus-storage: What will net metering become?”](#) *UtilityDive*
Shallenberger (2018). [“Arizona rooftop solar leases exempt from property tax, court rules”](#)
UtilityDive

Balaskovitz (2017). "[Michigan bill looks to clarify tax exemptions for distributed generation projects](#)" *Energy News Network*

April 22: Final class

Today we'll wrap everything up and prepare for the end-of-class presentations held during the final exam period.

Final Exam Period: Monday, April 29, 4-6 pm

We will have a public event, where each group will be asked to briefly present the key findings from their state, followed by discussion/debate about where there are common themes that emerge.