PA 567

Energy Resources: Policy & Administration

Fall 2024 Last Modified 6 Dec 2024

CLICK TO SEE SCHEDULE

Official Course Description

Reviews the history, politics, and institutions related to current energy policy and administration with particular attention to the Pacific Northwest and development of hydroelectric power. National energy policy history is reviewed including political,

financial, and environmental problems. Explores the roles of interest groups; state, local, national, and international governments; and regional governing institutions. It explores the changing distribution of social costs and benefits as both a cause and result of policy change. Passage of the 1980 Northwest Power Act, the Northwest Power Planning Council created in the act, and the implementation of the act will be studied, as will current issues like energy conservation, regional power planning, deregulation and the status of institutions involved in energy policy, and Columbia basin fish and wildlife conservation.

Background

Energy drove the industrial revolution and is driving the post-industrial revolution as well. Call centers, mobile phones, and quantum computers all share the need for reliable energy supplies. When combined, the transportation, building, and industrial energy industries create, by far, the largest economic sector in the world.



Figure 1: Source www.Hopeforthehills.org

Because of its socio-economic importance, as well as its substantial environmental footprint, the energy industry is heavily regulated.

Against this backdrop, the electricity sector is undergoing especially turbulent times as traditional business models are being altered due to renewable energy targets, climate change legislation, as well as energy efficiency and distributed generation requirements. Utilities are being required to deliver renewable electricity to their customers, but transporting the renewable electricity from rural to urban areas is increasingly difficult due to citizen and environmental opposition to new power lines. The Northwest



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electricity sector includes federal hydropower suppliers with large impacts on regional market development. With rapid decarbonization policies being promulgated that typically entail fuel switching from natural gas to renewable electricity technologies, natural gas suppliers' historical business models are also under flex.

PA 567 provides social science theories and analytical tools to help graduate students and energy sector professional navigate the complexities of the energy sector. The course is broken down into two primary modules. Module one prepares students to perform analyses of energy sector projects as well as the regulatory system overlaying the energy sector. The learning objective for module one also includes energy analysis in MS Excel to make students competitive for energy sector employment and academic research. Module two applies the skills learned in the first module to a range of energy policy topics relevant to the Western US. The policy and history of energy policy in the Western US is included throughout the course.

This course is recommended as a pre-requisite for PA 573 Smart Grid and Sustainable Communities.

Course Information

 Time:
 Wednesdays 6:40-9:20

 Room:
 URBN 204 & Zoom

 CRN:
 12416

Instructor Hal T. Nelson, Ph.D., CFA Associate Professor Email: <u>HNelson@pdx.edu</u> Phone: 503.236.6720 (mobile)

PAP 511 STUDENT CENTER: URBN 510 WEDNESDAYS 5:00-6:30 ROOM CODE 685271 Hybrid Course Zoom Meeting Information

<u>https://pdx.zoom.us/j/87369493981</u> iPhone one tap mobile +19712471195,,87369493981# US (Portland)

Professional Development Coordinator

Yachi lisako <u>cps_energy@pdx.edu</u>

Office Location: URBN 670-L

Virtual & In Person Office Hours: Tuesdays 1:30-3:30 & by appointment (preferred) You can join via Zoom and wait in the virtual waiting room until I am done with the previous student. **Please send me a meeting invite or email to reserve your office hours spot!** You can book a spot with me: <u>https://calendly.com/hal-psu/psu-meeting</u>



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The best way to get in touch with me is via email. I will endeavor to respond to email/voice messages within 1⁺/-1 business day. **Please include PA 567 in the subject line. Please do NOT use the Canvas email.**

FYI: In my elusive quest for work-life balance, I try not to check email on the weekends.

Course Prerequisites

Graduate-level policy process, policy analysis, microeconomics, and statistics courses are <u>suggested</u>.

The Learning Pyramid as a (rough) Heuristic: Average retention rates for material taught using various methods (estimated percentages and ordering of teaching strategies may vary for individuals and the subject matter).¹

Because lectures are the worst means of learning material, I use a mixed bag of pedagogical techniques in the class in order to increase learning rates in a seminar style. Learning by "practice doing" in the form of homework is one pedagogical strategy. Social science theories are incorporated into current energy policy problems to help integrate theory and practice. We also flip the classroom and students are given



Source: National Training Laboratories, Bethel, Maine

an opportunity to present their research as well as one of the course readings over the term.

Course Competencies

PSU's Department of Public Administration has developed a list of "key competencies" that students are expected to develop through their various course and experiences at PSU. The following key competencies are supported by this course.

- 1. Conceptualize, analyze, and develop creative and collaborative solutions to challenge in public policy, leadership and management.
- 2. Assess challenges and explore solutions to advance cross-sectoral and interjurisdictional cooperation in public programs and services.
- 3. Demonstrate verbal and written communication skills as a professional and through interpersonal interactions in groups and in society.

¹ <u>http://www.washingtonpost.com/blogs/answer-sheet/wp/2013/03/06/why-the-learning-pyramid-is-wrong/</u> Portland State

4. Think critically and self-reflectively about emerging issues concerning public service management and policy.

By the end of this course:

- 1. Students will develop a knowledge of energy supply and demand basics.
- 2. Students will understand the socio-political context of energy policy in the Western US.
- 3. Students will understand how the institutional history of the NW power system impacts current policy proposals and outcomes.
- 4. Students will understand linkages between energy production and consumption and its environment impacts.
- 5. Students will be able to perform basic energy analysis using MS Excel
- 6. Students will understand the changes to the electricity sector from climate change legislation, distributed renewable energy, as well as conservation policies.
- 7. Students will be able to write a clear and concise policy paper.
- 8. Students will be able to present research results effectively in a professional setting.

Evaluation: For-Credit Students

1. Each student is required to be the <u>discussion leader</u> (student chat) for one of the scholarly articles (preferred) or book chapters (less preferred) from the syllabus **that have been assigned** over the term <u>(15%)</u>.

News articles by themselves are not adequate for discussion leaders, but you are encouraged to link the readings to the news articles.

- a. Students need to use a reading from the current week you sign up for.
 - i. Again, scholarly articles and white papers are the preferred subject for discussion leaders. News articles need to be linked to the other readings.

The google sheet sign up for discussion leaders is <u>here</u> Make sure that your weekly topic is what you think it is in case the schedule has changed.

- b. Presentation should be a 10-minute (MAX) presentation using PowerPoint or handouts followed by Q&A.
- c. You <u>MUST</u> use the structure of the Discussion Leader Guidance PPT on Canvas >Modules> Course Assignments to structure your presentation.
- d. Post your PPT to Canvas prior to class: Discussions>PPTs file repository and discussion.
- e. Instead of presenting only on one of the readings, I also offer (encourage) you to offer an integration and evaluation of the speaker's material with the readings for that week (or the appropriate week).
 - i. This is more of a real-time analysis, with less preparation but similarly requires you to "know" the module's reading assignments.



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- f. If you choose a book chapter (discouraged), you should need to compare and contrast the chapter with the news article for the week. Other relevant class materials may be brought into the presentation as well.
- g. NEW: students now have the option to record their discussion leader presentation and post it to the weekly module as a resource for different types of learning. 1) Post video to the Discussion Board by Sunday night before the Wed class meeting. 2) Email me when it's up: <u>hnelson@pdx.edu</u> and I will also post it to the weekly module. Our goal is to have zero or one in-class discussion leader each week which opens up opportunities for more small group work. Follow the content instructions in Canvas >Modules> Course Assignments. Record your Discussion Leader in after signing into Zoom using your pdx.edu login: Share your PPT, and Record the presentation. You can download the recording from the zoom.pdx.edu website and then post it to the weekly discussion board.

You can also record with audio and video natively in PPT using the record button.

- 2. Course discussion board grading consists of two **Before Class Preparation (BCP)** elements (20%). They are due at 6:40 PM on Wednesday each week based on the current week's readings.
 - a. AFTER completing the week's readings, carefully craft one question **for the speaker** that you develop on your experience and the reading material. The question can be a clarification of the material, an extension of the speaker's material, a linkage between the speaker's material and other course reading. It can also identify logical inconsistencies in the material, question the "conventional wisdom" or ask questions about evaluative criteria that the speaker did not cover (ie equity, externalities, effectiveness, efficiency, or empowerment). These questions will be shared on the discussion board as possible for the speaker Q&A.
 - i. Please read the following blog on how to write engaging discussion questions: <u>https://www.eduflow.com/blog/how-to-write-discussion-questions-that-actually-spark-discussions</u>
 - Respond to one of your classmate's questions with a follow-on, extension, or clarification. You will not be able to "see" other student's Q's until you have posted your own question.
- 3. You are required to compose a group research paper that integrates the course learning objectives into an arena of your choosing (20%).
 - a. There will be a paper proposal due in February that will outline the research design and methods assignment.
 - i. Each member of the group will be graded on the quality of their own unique contribution to the paper. Each group member's effort on the paper will be graded by their peers.



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- ii. You are expected to be able to write at the graduate level, including concise summaries of policy concepts and results. I may refer you to the writing center: <u>http://www.pdx.edu/writingcenter/</u>
- iii. Put your ideas for possible paper topics into the Energy Policy & Mgt Tab in the News Report google sheet <u>here</u>:
- iv. More information on the research paper and proposal will be given out at a later date.
- 4. PPT and Presentation of the research paper: Students are expected to give a short presentation of their research topic the last week of class. This "mini-conference presentation" is a key learning outcome. (15%)
- 5. Homework assignment (<u>15 %</u>)
 - a. The homework is an energy analysis assignment and will cover material from the text, lectures, as well as the other readings.
 - b. There will be a required "lab" to go over the HW. We will try to find a time that works for all graduate students but will also record it for later viewing by those who cant attend.
 - There is also a video lecture on the HW here –PRIOR to attending the lab: https://media.pdx.edu/media/PA+567+NPV+Lecture+and+HW

<u>1/0 x6gccw8p</u> (You will need to be logged into pdx.edu in the same browser. If this doesn't work, try the link in the HW.doc)

- Finally, in-class participation is critical to the course learning environment <u>(15%)</u>.
 Student evaluation of their participation is based on Instructor evaluation.
 Participation will be evaluated over the entire term.
 - a. As part of your participation grade, you also need to upload your current professional bio <u>here</u>:

Evaluation: Professional Development Participants

- Professional development participants MUST complete the assignment to prepare a one paragraph bio on their history, interests, and future plans/desires.
 - Participants are strongly encouraged to join one of the research paper groups and offer their sage counsel to their peers.
 - Participants are also encouraged to bring in relevant news articles / reports to share with the class.
 - The Google Doc to add your bio to is <u>here</u>:
- NOTE: If you take the class through the professional development option, you will not be able to retroactively have it count towards the Graduate Certificate in Energy Policy and Management. If you think you may want to pursue the certificate, I suggest that you enroll for the class as for-credit.

Required Course Readings



All graduate students are **<u>required</u>** to buy the following book:

- Randolph, J., & Masters, G. M. (2018). *Energy for sustainability: technology, planning, policy*. 2nd Ed. Island Press. ISBN 9781610918206 (R&M) 1st edition is OK too, but you need to make sure the chapters #'s match up with the syllabus.
- Also, Blume, S. W. (2016). *Electric power system basics for the nonelectrical professional.* John Wiley & Sons is available from the PSU Library.

Professional development students without an energy background will also find these books useful.

• The R&M book is in the PSU bookstore. If you buy it online, be sure to get expedited shipping as we will be using it immediately. I have an extra copy to loan out to one person over the term. First-come, first-served.

Handouts from other book chapters will be given for the reading assignments. Additional readings are in the Files folder.

In addition to the course text, **<u>other required</u>** journal articles and book chapters will be posted on Canvas.

- If something is missing, please email me immediately.
- Optimal readings are always coming across my desk. The syllabus may contain TBA (to be announced) when I have yet to find an optimal reading to exhibit the learning goals of the week. Thus, the syllabus should be considered a <u>living document</u> that will change over the course of the term. *The most current version can always be found on Canvas and you should consult it before doing the readings each week*.

Recommended Readings

I reserve the right to distribute additional readings as the term progresses. I will usually bring some elements of the <u>recommended</u> readings into the class discussions, so some familiarity with them (i.e. quick scan) on your part will be beneficial to your learning environment.

Great information can be found on energy policy and management in the NW through the local industry newspaper, *Clearing Up*. *Clearing Up* is available to anyone with a PDX.EDU email.

• You need to sign up in the Clearing Up tab Google Sheet with your name and PSU email <u>here:</u>

List of Acronyms (LoA-- Sorry I couldn't resist)

Note that there is a list of common acronyms used in the energy world here: <u>https://docs.google.com/document/d/1hIMPrWGk152RHgGwDglQzseVwu9tj44BWHwF</u> <u>eo4Zxlo/edit?usp=sharing</u>

Important Dates for Graduate Students

- Important dates for dropping or changing grading options can be found <u>here</u>
 - Last day to change to Pass/Fail grade option: 12 Nov



- \circ Homework: Homework will be due electronically on Canvas at 6:40 on the day of class
 - HW #1 due: **30 Oct** 6 Nov at 6:40.
- Final Group paper due: **13 Dec (Friday) at 6:40 pm**
 - Paper Proposal Due: **13 Nov** at 6:40 (Canvas
 - Student research presentation PPT due: 8 Dec (Sunday) at 6:40 pm (email)
 - Student research presentations: **11 Dec** at 6:40 pm in-class
- All work products for the class due no later than **13 Dec at** 6:40 pm (email)

Schedule (Click on the hyperlink to see each module's readings) Subject to change based on speaker availability

Week	Date	Placeholder Topic	Speaker	Deliverable
1	2 Oct	Introduction of class members and syllabus	Nelson PSU	
2	9 Oct	The History of & Institutional Context for NW Energy Policy	Jeff Hammarlund PSU	
3	16 Oct	The Electricity and Natural Gas Sectors- Overview	Nelson PSU	
4	23 Oct	Integrated Resource & Distribution Planning	Tomas Morrisey-NW Council Confirmed	
5	30 Oct	Grid Modernization #1 and Rates	Bob Jenks-OR CUB Confirmed	
6	6 Nov	Energy Efficiency and Flexible Loads (Grid Mod #2)	Ruchi Sadhir-ODOE Confirmed 8:00	HW #1 Due
7	13 Nov	Electric Vehicles and Energy Justice	Wendy Koelfgen & Ricardo Moreno- Gonzalez-PCEF. Vinh MasonPDX Confirmed 8:00 pm	13 Nov Paper Proposal Due
8	20 Nov	<u>Carbon and</u> <u>Renewables Policies &</u> <u>Columbia River Treaty</u>	Hub Adams-BPA, Kathy Eichenberger-BC Ministry of Energy, Jim Heffernan-CRITFC	
9	27 Nov	Energy Economics & Modeling	No Speaker Video Only	
Portland State				

		Thanksgiving: No Class		
10	4 Dec	<u>Siting New</u> <u>Renewables (& Power</u> <u>Lines)</u>	Pam Sporborg-PGE Confirmed	Draft PPT due 8 Dec (Sunday) at 6:40
11	11 Dec	Where the Rubber Meets the Road & Student Paper Presentations	Dan James-BPA Confirmed @ 6:40 PSU Students	Presentations (Paper due: Friday 13 Dec at 6:40pm)

Course Reading Assignments:

Week 1: Introduction of class members and syllabus (Back to Top) Meaghan Lingo—Center for Public Service Course Overview

Course Overview

The Importance of Energy

For the first time since president Nixon declared energy "independence" as a policy priority, the gap between US energy production and energy consumption has begun to narrow, due in large part to shale oil and gas production in the U.S.—but also to improving energy efficiency and policy-driven incentives.

Others have described this as a commodity "super-cycle", but this doesn't do justice to the underlying supply and demand dynamics. See the "Cobweb graph" with inflation adjusted gas prices on the Y-axis and per capita energy consumption on the X axis. Start on the right side of the chart in 1972 and work to the left to follow the two big cobweb patterns since 1972.



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The Importance of Hydropower in the Northwest

The antithesis of the fossil fuel super-cycle is cheap hydropower. The Northwest enjoys abundant hydro resources, that have (somewhat) stable production costs, but these resources are integrated into a power market that includes the entire Western US, including California. Climate change and increasing amounts of wind and solar electricity are also changing the value of hydropower.

Reference

• Arango, S., & Moxnes, E. (2012). Commodity cycles, a function of market complexity? Extending the cobweb experiment. *Journal of Economic Behavior & Organization*, 84(1), 321-334

DISCUSSION QUESTIONS:

- 1. What do you think causes the relationship between energy and price in the above graph?
- 2. What effects might this pattern have on investment and consumption decisions, and how might these dynamics it be mitigated (if at all)?

Institutional Context for Northwest Energy Policy Guest Lecturer: Jeff Hammarlund

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Required Reading:



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- Hammarlund, J. (2002) "Oregon's Role as an Energy Innovator: A Historical Perspective". Oregon's Future Journal. Spring. (Available on Canvas. Note: Jeff will discuss much of this material in class and will assume you will have read it)
- Northwest Power and Conservation Council, <u>The State of the Columbia River</u> <u>Basin (Report to Congress and the Citizens of the Northwest</u>, January 2024 (definitely read pages 13-15, skim the rest)
- Bonneville Power Administration (2024) <u>BPA Facts</u>
- Bonneville Power Administration (2021) <u>Fact Sheet-Preparing for a Resilient</u> <u>Columbia River Hydropower System</u>
- US Department of State (July 2024) <u>Summary of the Agreement in Principle to</u> <u>Modernize the Columbia River Treaty Regime</u> (Note: this and the next article are just an introduction; there will be a session on the updated Columbia River Treaty later in the course)
- Columbia Basin Bulletin (July 2024) U.S., Canada Reach Agreement in Principle for Modernizing Columbia River Treaty, (on Canvas)
- Barringer, F. (2018) <u>Changing Currents: Picturing a Northwest Without Cheap</u> <u>Public Hydropower</u>. Stanford University, The Bill Lane Center for the American West, January 29. (Note: this "counterfactual" offered by the former senior environmental reporter at the *New York Times* was widely read and quite influential at the time)

Additional Recommended Reading:

- Northwest Power and Conservation Council (March 2024) <u>Preparing for the</u> <u>Council's Ninth Power Plan</u> (Note: this is the top priority of the additional recommend readings)
- Hammarlund, J., (2001). "California's Search for Energy Incites Fear in the Northwest", *San Francisco Chronicle*, (Canvas)
- US Army Corps of Engineers, Bonneville Power Administration and Bureau of Reclamation (2003), *The Federal Columbia River Power System* (Note: this will be particularly helpful to those of you who are not from the Northwest and are least familiar with the multiple uses of the Columbia River)
- BPA and US Army Corps of Engineers (2013), <u>US Entity Regional</u> <u>Recommendation for the Future of the Columbia River Treaty After 2024 and</u> <u>Cover Letter</u>, December 13 (Note: this describes the near consensus position parties in the Northwest came up with and recommended to the US State Department as the starting point for negations with its Canadian counterparts)
- Congressional Research Service (2020), <u>Columbia River Treaty Review,</u> <u>December 15 Update</u>
- Sowards, A. (2019). <u>Renegotiating the Columbia River Treaty, Six Decades</u> <u>Later</u>, (High Country News)

News Article—Always Required

• Brunner, J, (2011) <u>"The High-Stakes Math Behind the West's Greatest</u> <u>River"</u>. Updated online version of article that appeared originally in *Forbes Magazine*, November.

Reference



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• Vogel, E. (2007). The Columbia river's region: Politics, place and environment in the Pacific Northwest, 1933-Present (Doctoral dissertation, University of Oregon). On Canvas.

DISCUSSION QUESTIONS: put your questions Canvas>Discussion Question>Week#

The Electricity and Natural Gas Sectors-Overview (Nelson) (Back to Top) Introductory Corner:

- Randolph, J., & Masters, G. M. (2018). *Energy for sustainability: technology, planning, policy*. Island Press. Chapter 9.
- PGE. (2021). Understanding My Bill: Guide to charges and other important information. <u>https://portlandgeneral.com/help/help-topics/understanding-my-bill</u>
- PJM. (2023). Capacity Market (RPM). <u>https://learn.pjm.com/three-priorities/buying-and-selling-energy/capacity-markets.aspx</u>
- Peters, B. Guy (2019). American public policy: Promise and performance, 11th Edition. Los Angeles, CA: Sage. (10th edition is OK too) Ch 3: Explaining Policy Choices. On Canvas.

Required Reading

- Verma and Tan. (2024). A bottle of water per email: the hidden environmental costs of using AI chatbots. Washington Post. 18 Sept. https://www.washingtonpost.com/technology/2024/09/18/energy-ai-use-electricity-water-data-centers/
- Blanke, E. (2023). En Banc: Current Gas Market Conditions and Impacts of Gas Prices on Electricity. CA ISO presentation in CPUC <u>En Banc Proceeding</u>. PAGES 61-67. 7 February. On Canvas.
- Busby, J. W., Baker, K., Bazilian, M. D., Gilbert, A. Q., Grubert, E., Rai, V., ... & Webber, M. E. (2021). Cascading risks: Understanding the 2021 winter blackout in Texas. *Energy Research & Social Science*, 77, 102106. On Canvas.
- PGE. (2024). Comparative Analysis of the CAISO's EDAM and the SPP's Markets+. READ pp. 1-4, SKIM other sections of interest. On Canvas.

News Article

- Howland, E. (2024). Reregulation? How utilities and states are responding to PJM's record capacity prices. Utility Dive. 4 Sept. <u>https://www.utilitydive.com/news/pjm-capacity-auction-results-firstenergyexelon-aep/725952/</u>
- NEW: Rogoway, (2024). Oregon's data centers want a lot more electricity. *The Oregonian*.13 Oct. On Canvas.

Recommended

• Ohrenschall, M. (2019). Exploring Consequences of the October BC Gas Pipeline Rupture. *Clearing Up.* 4 Jan. On Canvas.

Reference



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- Penn State Univ. (ND). 6.2.1. The Averch Johnson Effect. *EBF 483 Introduction to Electricity Markets*. <u>https://www.e-education.psu.edu/ebf483/node/681</u>
- Nersesian, R.L. (2007). Energy for the 21st Century: A Comprehensive Guide to Conventional and Alternative Sources. NY: ME Sharpe. <u>Ch 2 and 7</u>—Electricity and natural gas. On Canvas.
- Sabatier, P. Weible, C. et al. (2018). The Advocacy Coalition Framework. In Sabatier, P. Weible, C. *Theories of the Policy Process. On Canvas.*

Integrated Resource Planning including Distribution Planning(Back to Top)Guest Speaker: Tomas Morrisey NW Council

Introductory Corner

 NW Energy Coalition. (2022). Lunch and Learn #1: Introduction to Utility Integrated System Planning. Watch 1:00-16:00 mins. Listen for other sections of interest to you. <u>YouTube.</u>

Required Reading

- E3. (2024). Integrated System Planning: A New Planning Paradigm. 29 July. <u>https://www.ethree.com/wp-content/uploads/2024/07/20240729-E3-SRP-ISP-A-New-Planning-Paradigm.pdf</u>
- NW Council. (2022). 2021 POWER PLAN SUMMARY. Available here.
 - o There is also a mid-term assessment from Sept 2024 here
 - \circ $\;$ The NW Council did a brief evaluation of the 2024 heat wave <u>here</u>
- OPUC. (2022). Order 22-390. Near-term guidance on Roadmap Acknowledgement and Community Lens Analysis the first Clean Energy Plans. 25 Oct. APPENDIX A TOPICS 1-5 (Appendix A pp. 23-35) <u>ONLY</u>. The full document can be found <u>here</u>.

News Article:

• Halper, E. (2024). Amid explosive demand, America is running out of power. 7 March. *Washington Post.* On Canvas and available <u>here</u>

Recommended

• Homer, J.S. et al. (2022). Considerations for Resilience Guidelines for Clean Energy Plans. 7 Sept. OPUC. <u>Here</u>. REVIEW

Reference

• Wilson and Biewald. (2013). *Best Practices in Electric Utility Integrated Resource Planning: Examples of State Regulations and Recent Utility Plans*. The Regulatory Assistance Project. June. **EXECUTIVE SUMMARY, OREGON PP 13-15, AND CH 4.** SKIM THE REST. On Canvas.



- PGE. 2021. Distribution Plan. Part 1. Executive Summary: PP 7-20 Other sections according to your interest. http://edocs.puc.state.or.us/efdocs/HAD/um2005had104621.pdf
- Pope, D. (2008). Nuclear Implosions: The Rise and Fall of the Washington Public Power Supply System. At PSU library.
- Carvallo, J. P., Larsen, P. H., Sanstad, A. H., & Goldman, C. A. (2018). Long term load forecasting accuracy in electric utility integrated resource planning. Energy Policy, 119, 410-422. On Canvas.

Grid Modernization, Rate and Market Design Guest Speaker: Bob Jenks Oregon CUB Introductory Corner

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- PowerMag. (2018). How does the Western Energy Imbalance Market Work?. 1 Oct. <u>https://www.powermag.com/how-does-the-western-energy-imbalance-market-work/</u>
- US AID. (2021). Primer on Rate Design for Cost-Reflective Tariffs. January. https://pubs.naruc.org/pub.cfm?id=7BFEF211-155D-0A36-31AA-F629ECB940DC

Required Reading

- Hausker, C. (2021). Power Market Design for an Era of Rapid Decarbonization. *NRRI Insights*. Oct. <u>https://pubs.naruc.org/pub/96C4BEAF-1866-DAAC-99FB-D4C1060DDF7D</u>
- Nelson, H. (2020). *What if We Build it and Nobody Comes?* Transactive Energy Systems (TES) Conference. 8 December. 10 minute <u>Video link</u>
- Moser, N. (2024). Wildfire Mitigation: Planning and Rate Making Implications. Report to OR Senate Interim Committee on Energy and Environment. 24 Sept. <u>here</u>
- St. John. J. (2024). Smart tech could help fix the biggest barrier to building clean energy. *Canary Media*. 22 Feb. <u>https://www.canarymedia.com/articles/transmission/smart-tech-could-help-fix-</u> the-biggest-barrier-to-building-clean-energy

NEWS ARTICLE:

 Colthorpe, A. (2022). FERC Order 2222: Has the promised game changer for US distributed energy resources failed? *Energy Storage News.* 16 November. <u>https://www.energy-storage.news/ferc-order-2222-has-the-promised-game-changer-for-us-distributed-energy-resources-failed/</u>

RECOMMENDED

- Read either the Staff Report (3/31) or the Allowed Utility Filing (4/5) for PGEs Income-Qualified Bill Discount Advice Letter 22-01 on the OPUC page <u>here</u>. You can also skim CUBs or Community Energy Projects comments.
- Storrow, B. (2024). What Heat Wave? Batteries Kept the Lights on in California. 10 Sept. *E&E News*. <u>https://www.eenews.net/articles/what-heat-wave-batteries-keep-the-lights-on-in-california-2/</u>



Energy Efficiency and Flexible Loads Guest Speaker: Ruchi Sadhir at 8:00 Introductory Corner:

• Randolph, J., & Masters, G. M. (2018). *Energy for sustainability: technology, planning, policy*. Island Press.

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- Chapter 8.1-8.5, Building Technologies
- Chapter 16.1-16.3, Market Failures and Solutions
- Chapter 18.1, State Energy Policy
- US DOE (2021). Energy Efficiency Policies and Programs.
- US DOE. (2022). Energy Saver: Inflation Reduction Act of 2022 What it Means for You. <u>https://www.energy.gov/energysaver/articles/inflation-reduction-act-2022-what-it-means-you</u>

Required Readings

- Nelson, H., Johnson, H. (2023). Data-Driven, Equity-Centered Energy Efficiency for Multifamily Properties. Working Paper. On Canvas.
- OR DOE. (2023). 2023 Oregon Legislative Report. READ SEVERAL SUMMARIES OF YOUR CHOICE & HB 3409/SB 870: Building Performance Standard <u>https://www.oregon.gov/energy/Data-and-Reports/Documents/2023-ODOE-Legislative-Report.pdf</u>.
- Cohn, C., and N. W. Esram. 2022. *Building Electrification: Programs and Best Practices*. Washington, DC: American Council for an Energy-Efficient Economy. accee.org/research- report/b2201. EXECUTIVE SUMMARY
- CRITFC. (2022). Energy Vision for the Columbia River Basin. Full Report. https://critfc.org/wp-content/uploads/2024/06/EnergyVision-full-report.pdf

News Article

 Wong. (2024). How the climate is changing your energy bill. *High Country News*. <u>https://www.hcn.org/issues/56-11/how-the-climate-is-changing-your-energy-bill/</u>

Recommended Readings

- US DOE. (2022). Clean Energy Corps. https://www.energy.gov/CleanEnergyCorps
- Teague, K. (2022). Red States Still Pose a Major Threat to Biden's Justice40 Initiative, Activists Warn. Inside Climate News. 5 June.

References

- Nadel, S. (2012). The Rebound Effect, Large or Small? <u>http://aceee.org/files/pdf/white-paper/rebound-large-and-small.pdf</u>
- National Energy Screening Project. (2017). National Standard Practice Manual. <u>https://www.nationalenergyscreeningproject.org/national-standard-practice-manual/</u>

DISCUSSION QUESTIONS: put your questions Canvas>Discussion Question>Week#



Electric Vehicles and Energy Justice

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Guest Speaker: Wendy Koelfgen & Ricardo Moreno-Gonzalez-PCEF, Vinh Mason City of Portland

Introductory Corner

 ODOE. (2022). Oregon Biennial Energy Report: Energy Resource & Technology Review: Clean & Efficient Vehicles: pp. 140-158. https://energyinfo.oregon.gov/ber

Required Readings

- PCEF Climate Investment Plan -<u>https://www.portland.gov/bps/cleanenergy/climate-</u> <u>investment/documents/pcef-climate-investment-plan/download</u>
- BPS Climate Policy and Programs -<u>https://www.portland.gov/bps/climate-action/climate-program</u>
- History of Climate Leadership -<u>https://www.portland.gov/bps/climate-action/history-and-key-documents</u>
- Washington State Dept of Commerce. (2023). Transportation Electrification Strategy (TES) DRAFT.
 - https://deptofcommerce.app.box.com/s/sz7bei0ug018dqio3u3wqkgblqd1yanl
- SEPA. (2023). The State of Bi-Directional Charging in 2023. READ CHAPTERS 1 &
 4. SKIM REST. On Canvas.
- Carley, S., Engle, C., & Konisky, D. M. (2021). An analysis of energy justice programs across the United States. *Energy Policy*, 152, 112219. On Canvas
- St. John. Jeff. (2024). California lawmakers punt on chances to deal with utility bill crisis. 5 Sept. *Canary Media*.

https://www.canarymedia.com/articles/utilities/california-lawmakers-punt-onchances-to-deal-with-utility-bill-crisis

NEWS ARTICLE:

• NEW: Halper, E. (2024). A utility promised to stop burning coal. Then Google and Meta came to town. *Washington Post*. 12 Oct. On Canvas.

Recommended

- Farrell, J. (2024). What the Monopoly Utility Model Really Costs Us. ISLR. 30 May. SKIM <u>https://ilsr.org/wp-content/uploads/2024/05/upcharge-visual-exec-summary.pdf</u>
- Mariel Thuraisingham (2022) Centering Equity in Washington's Clean Energy Transition <u>https://frontandcentered.org/centering-equity-in-washingtons-clean-energy-transition/</u>
- Charity Fain and Oriana Magnera (2020). Best Practices for Community Engagement <u>https://www.oregon.gov/puc/utilities/Documents/DSP-Archive.pdf</u> (Webinar #6)



- Elmallah, S., Reames, T. G., & Spurlock, C. A. (2022). Frontlining energy justice: Visioning principles for energy transitions from community-based organizations in the United States. *Energy Research & Social Science*, 94, 102855. On Canvas
- Fowlie, M. (2023). Who's Afraid of Retail Electricity Rate Reform?. 17 April. UC Energy Institute at Haas Blog. <u>https://energyathaas.wordpress.com/2023/04/17/whos-afraid-of-retail-</u> electricity-rate-reform/

Reference

- McRaney, D. (2022). *How Minds Change.* Chapter 3. On Canvas.
- Energy Trust of Oregon (2021) Diversity, Equity, and Inclusion Operations Plan <u>https://www.energytrust.org/wp-content/uploads/2021/03/2021-DEI-</u> <u>Operations-Plan.pdf</u>
- National Conference of State Legislatures (2022). Energy Justice and the Energy Transition <u>https://www.ncsl.org/research/energy/energy-justice-and-theenergy-transition.aspx</u>
- Washington State Department of Health (2022). Environmental Health Disparities Map. <u>https://doh.wa.gov/data-and-statistical-reports/washington-tracking-network-wtn/washington-environmental-health-disparities-map</u>

DISCUSSION QUESTIONS: put your questions Canvas>Discussion Question>Week#

Carbon and Renewables Regulation Columbia River Treaty

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Guest Speakers: Hub Adams-BPA, Kathy Eichenberger-BC Ministry of Energy, Jim Heffernan-CRITFC

Introductory Corner

 Randolph, J., & Masters, G. M. (2018). Energy for sustainability: technology, planning, policy. Island Press. Chapter 10 <u>OR</u> 11 (based on your interests), Chapter 12.

Required Reading

- Review from week 2:
 - US Department of State (July 2024) <u>Summary of the Agreement in</u> <u>Principle to Modernize the Columbia River Treaty Regime</u> On Canvas.
 - Columbia Basin Bulletin (July 2024) U.S., Canada Reach Agreement in Principle for Modernizing Columbia River Treaty. On Canvas.
- 1000 Friends of Oregon et al. (2024). RE: Actions Needed to Strengthen Columbia River Treaty Agreement-In-Principle. 16 Sept. On Canvas.
- WMO. (2024). State of the Climate 2024 Update for COP29. 11 Nov. Content Alert: Read the short PDF if you are emotionally able. <u>https://wmo.int/publication-</u> <u>series/state-of-climate-2024-update-</u> <u>cop29#:~:text=2015%2D2024%20will%20be%20the,and%20economies%20acros</u> <u>s%20the%20world</u>.



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• Stechemesser, A., et al. (2024). Climate policies that achieved major emission reductions: Global evidence from two decades. *Science*, 385(6711), 884-892. On Canvas.

News Article:

 Halper, E. & O'Donovan, C. (2024). As data centers for AI strain the power grid, bills rise for everyday customers. *Washington Post.* 1 Nov. <u>https://www.washingtonpost.com/business/2024/11/01/ai-data-centers-</u><u>electricity-bills-google-amazon</u> On Canvas too.

Recommended

- Huff & Ryan. (2024). What it will take to restart decommissioned US nuclear plants. A primer. *Bulletin of the Atomic Scientists*. 29 Oct. <u>https://thebulletin.org/2024/10/what-it-will-take-to-restart-decommissioned-us-nuclear-plants-a-primer</u>
- WA Dept of Ecology. (2023). Cap-and-Invest Linkage Criteria: Preliminary Analysis Report. October. <u>https://apps.ecology.wa.gov/publications/summarypages/2314005.html</u>

 Nelson, H. (2008). Planning Implications from the Interactions between Renewable Energy Policies and Carbon Regulation. *Environmental Planning and Management*.

51 (4). July. pp. 581-96. On Canvas

Reference

- CRITFC. (N.D.). Columbia River Treaty. (Chronology). <u>https://critfc.org/tribal-treaty-fishing-rights/policy-support/columbia-river-treaty/</u>
- National Research Council. (2013). Abrupt Impacts of Climate Change: Anticipating Surprises. <u>http://www.nap.edu/catalog.php?record_id=18373</u> Summary PP 1-18 ONLY.
- Partnership for Market Readiness (PMR) 2017. Carbon Tax Guide: A Handbook for Policy Makers. Washington, DC. License: Creative Commons Attribution CC BY 3.0 IGO

https://openknowledge.worldbank.org/bitstream/handle/10986/26300/Carbon %20Tax%20Guide%20-

%20Main%20Report%20web%20FINAL.pdf?sequence=1&isAllowed=y

DISCUSSION QUESTIONS: put your questions Canvas>Discussion Question>Week#

Energy Sector Economics & Modeling & Resource Adequacy: NO CLASS (Back to Top) Guest Speaker: None

Introductory Corner:

• Randolph, J., & Masters, G. M. (2018). *Energy for sustainability: technology, planning, policy*. Island Press. Chapter 3: Energy Futures.

Required Reading

• Download the Voice Over PPT on Canvas after doing the following readings. You may need to click Slide Show>Play Narrations and Use Timings.



- EIA. (ND). <u>Annual Energy Outlook Retrospective Review</u>. ALSO TABLES 1, 8A ,16. (Excel format is easier to view for 8A, 16). NOTE: Total over/under estimation is less important than cyclical nature of over/under estimation shown in the tables.
- Brattle. (2024). BPA Day-Ahead Market Participation Benefits Study. October. READ SLIDES 1-16. SKIM OTHERS OF INTEREST. NOTE: Adjusted Production Cost (APC) is defined on slide 49. <u>https://www.brattle.com/insights-events/publications/newbrattle-report-examines-customer-impacts-of-the-bonneville-power-</u> administrations-day-ahead-market-participation-options/
 - If you are interested in the modeling, Brattle walks through the slides in the video here: <u>https://www.youtube.com/watch?v=iAST3JFqfEM</u>
- Kann, S. (2024). Under the hood of data center power demand. *Latitude Media*.
 2 June. <u>https://www.latitudemedia.com/news/catalyst-under-the-hood-of-data-center-power-demand</u>

News Article :

 Kiley, B. (2023). Seattle utilities consider massive efforts that could help green our grid. Seattle Times. 22 March. <u>https://www.seattletimes.com/pacific-nw-magazine/seattle-utilities-consider-massive-efforts-that-could-help-green-our-grid/</u>

Recommended

- McKinsey. (2023). What would it take to scale critical climate technologies? 1 Dec. <u>https://www.mckinsey.com/capabilities/sustainability/our-insights/what-would-it-take-to-scale-critical-climate-technologies#/</u>
- US EPA (2021). Co-Benefits Risk Assessment Health Impacts Screening and Mapping Tool (COBRA). <u>https://cobra.epa.gov/</u> BUILD A SCENARIO WITH THE TOOL
- NW Council. (2024). Pacific Northwest Power Supply Adequacy Assessment for 2029. 9 Aug. <u>https://www.nwcouncil.org/reports/2024-4/</u>
- Penn, I. (2022). Dodging Blackouts, California Faces New Questions on Its Power Supply. NYT. 25 Sept. <u>https://www.nytimes.com/2022/09/25/business/energy-environment/california-energy-grid-heat.html</u> PDF on Canvas as well.
- NW Council. (2021). The 2021 Northwest Power Plan: https://www.nwcouncil.org/fs/17680/2021powerplan_2022-3.pdf
 - Also, go to NW Council supporting material site map and read up on one subject that you are particularly interested in. Some possibilities are climate change, transportation electrification, energy efficiency assessment, etc. Hopefully that will make for some interesting questions in the class that get a bit more into the details. Here is the link for the supporting material: https://www.nwcouncil.org/2021powerplan_sitemap
- Chestnut, L.G., and Mills, D.M. (2005). A Fresh Look at the Benefits and Cost of the US Acid Rain Program. *Journal of Environmental Management*. 77 (3). November. Pp. 252-266. On Canvas.

References



- Carvallo, J.P. Et al (2023). A Guide for Improved Resource Adequacy Assessments in Evolving Power Systems: Institutional and Technical Dimensions. June. <u>https://emp.lbl.gov/publications/guide-improved-resource-adequacy</u>
- Varian, H. (2003). Intermediate Economics. 6th Ed. NY: Norton. CH 15.
- Resource costs
 - Lazard Levelized Cost of Energy, Levelized Cost of Storage, and Levelized Cost of Hydrogen Reports (<u>https://www.lazard.com/perspective/levelized-cost-of-energy-levelized-cost-of-storage-and-levelized-cost-of-hydrogen/</u>)
 - LBNL's Land-Based Wind Market Report (<u>https://emp.lbl.gov/wind-technologies-market-report</u>)
 - LBNL's Utility-Scale Solar Report (https://emp.lbl.gov/publications/utility-scale-solar-2023-edition
 - Chapter 6 of PGE's 2019 IRP (<u>https://edocs.puc.state.or.us/efdocs/HAA/lc73haa162516.pdf</u>)
- Capacity expansion modeling:
 - NREL ReEDS model documentation (<u>https://www.nrel.gov/docs/fy21osti/78195.pdf</u>)
- Production cost modeling in action:
 - NREL Electrification Futures Study (<u>https://www.nrel.gov/docs/fy21osti/79094.pdf</u>)
 - LA 100 Study (https://www.nrel.gov/docs/fy21osti/79444-ES.pdf)
 - GridLab California 2030 Study (<u>https://gridlab.org/wp-</u> <u>content/uploads/2022/05/GridLab_California-2030-Study-Technical-</u> <u>Report-5-9-22-Update1.pdf</u>)
- Resource adequacy modeling:
 - Redefining Resource Adequacy for Modern Power Systems, ESIG Report (<u>https://www.esig.energy/resource-adequacy-for-modern-power-systems/</u>)
 - GridPathx RA Toolkit (<u>https://gridlab.org/gridpathratoolkit/</u>)
- Economy-wide decarbonization modeling:
 - Oregon Clean Energy Pathways Analysis (<u>https://www.cleanenergytransition.org/projects/deep-decarbonization-pathways/oregon-clean-energy-pathways-analysis</u>)
- Multi-criteria (attribute) decision-making
 - Wang, J. J., Jing, Y. Y., Zhang, C. F., & Zhao, J. H. (2009). Review on multicriteria decision analysis aid in sustainable energy decision-making. *Renewable and Sustainable Energy Reviews*, 13(9), 2263-2278. On Canvas.
 - Pohekar, S. D., & Ramachandran, M. (2004). Application of multi-criteria decision making to sustainable energy planning—a review. *Renewable and sustainable energy reviews*, 8(4), 365-381. On Canvas.
- Linear programming

Portland State

- Vanderbei, R. J. (1996). *Linear Programming: Foundations and Extensions*. Boston : Kluwer Academic Publishers. Chapters 1&2. On Canvas
- Sensitivity and scenario analysis
 - Lane, et al. (2005). Background Material B: Foresight Scenarios For The Uk Domestic Sector. PP 1-8. Based on the report: http://www.foresight.gov.uk/Energy/Fuelling the Future Nov 2000.pdf
 - Kann, A., Weyant, J.P. (2000). Approaches for Performing Uncertainty Analysis in Large-Scale Energy/Economic Policy Models. *Environmental Modeling and Assessment* 5, 29-46. On Canvas.

Incentivizing and Siting New Renewables (and Power Lines)

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Speaker: Pam Sporborg PGE

Introductory Corner:

- ODOE. (2020). Energy 101: Transmission Lines. In Oregon 2020 Biennial Energy Report. Pp 3-15 (103-115). <u>https://energyinfo.oregon.gov/ber-2020</u>
- US EPA. (2011). What is the National Environmental Policy Act. <u>https://www.epa.gov/nepa/what-national-environmental-policy-act</u>
- Cox, S. (2016). Financial Incentives to Enable Clean Energy Deployment. NREL/TP-6A20-65541 <u>https://www.nrel.gov/docs/fy16osti/65541.pdf</u>

Required Reading

- NW Energy Coalition. (2024). NWEC Briefing on Transmission 2024. MINUTES 1-30. <u>https://www.youtube.com/watch?v=b1AQfMt3hrl</u>
- St. John. J. (2023). California takes big first step toward floating offshore wind. *Canary Media*. 27 Sept. <u>https://www.canarymedia.com/articles/wind/california-takes-big-first-step-toward-floating-offshore-wind</u>
- Nelson, H., Hass, S., Sarle, K., Renerie, A. (2021). <u>Communities of Place vs</u> <u>Communities of Interest:</u> Citizen Information and Locally Unwanted Land Uses. *Environmental Impact Assessment Review*. Link above and On Canvas.
- Howland, E. (2024). FERC expands states' role in regional transmission planning, cost allocation *Utility Dive*. 22 Nov. <u>https://www.utilitydive.com/news/ferc-</u> <u>states-transmission-planning-cost-allocation-rehearing/733698/</u>

News Article

 Cart, J. (2023). 'Another attempt to industrialize the coast': California's Central Coast residents work to stop — or at least slow down — offshore wind. CalMatters. 16 Oct. <u>https://calmatters.org/environment/2023/10/california-offshore-wind-central-coast/</u>

Recommended: Siting

• Teplin et al. (2024). The Electricity Transmission and Greenhouse Gas Implications of the EPRA Draft Legislation. <u>https://rmi.org/insight/the-</u> <u>electricity-transmission-and-greenhouse-gas-implications-of-the-epra-draft-</u> <u>legislation</u>



- Sudd, R. et al (2023). How To Reform Federal Permitting To Accelerate Clean Energy Infrastructure A Nonpartisan Way Forward. Brookings Institution Policy Brief. February. <u>https://www.brookings.edu/wp-</u> content/uploads/2023/02/20230213 CRM Patnaik Permitting FINAL.pdf
- St. John. J. (2024). This DOE-backed software is helping to unclog the grid. Canary Media. 12 Nov. <u>https://www.canarymedia.com/articles/transmission/this-doe-backed-software-is-helping-to-unclog-the-grid</u>
- Nelson, H., Swanson, B., Cain, N. (2018). <u>Close and Connected</u>?: The Effects of Proximity and Social Ties on Citizen Opposition to Electricity Transmission Lines. *Journal of Environment and Behavior*. Vol 50, Issue 5, pp. 567 – 596. (Impact factor 3.15-2018) <u>https://doi.org/10.1177/0013916517708598</u>

Recommended: Financing

- Abolhosseini, S., & Heshmati, A. (2014). The main support mechanisms to finance renewable energy development. *Renewable and Sustainable Energy Reviews*, 40, 876-885. On Canvas.
- IRENA. (2023). Renewable Power Generation Costs in 2022. <u>https://www.irena.org/Publications/2023/Aug/Renewable-Power-Generation-Costs-in-2022</u>
- St. John, J. (2023). New tax-credit transfer rules could unlock \$1T in cleantech investment. *Canary Media*. 18 August. <u>https://www.canarymedia.com/articles/climatetech-finance/new-tax-credittransfer-rules-could-unlock-1t-in-cleantech-investment</u>

Reference

- Center for American Progress. (2023). Understanding Direct Pay and Transferability for Tax Credits in the Inflation Reduction Act. 5 June. <u>https://www.americanprogress.org/article/understanding-direct-pay-and-transferability-for-tax-credits-in-the-inflation-reduction-act/</u>
- National Academies of Sciences, Engineering, and Medicine. 2023. Accelerating Decarbonization in the United States: Technology, Policy, and Societal Dimensions. Washington, DC: The National Academies Press. https://doi.org/10.17226/25931.

DISCUSSION QUESTIONS: put your questions Canvas>Discussion Question>Week#

Week 11: Course Held at Regular Time During Finals Week! (Back to Top) Where the Rubber Meets the Road (Back to Top)

Dan James BPA 6:40-7:40

- Paper Presentations
- Course Evaluations:
- Team Paper Evaluations

Introductory Corner



• BPA. (2024). 2024-2028 Strategic Plan. <u>https://www.bpa.gov/about/who-we-are/strategic-plan</u>

Required Reading

- BPA. (2023). Provider of Choice (Post-2028). SKIM: *Meeting slide deck: Overview of draft Provider of Choice Policy*. 26 July. Under Meeting Materials. <u>https://www.bpa.gov/energy-and-services/power/provider-of-choice</u>
- Nelson, H. (2020). Electrify Everything? Heat and Light in Deep Decarbonization Policies. *Public Utilities Fortnightly*. Jan. pp. 62-67. <u>https://www.fortnightly.com/fortnightly/2020/01/electrify-</u> <u>everything?authkey=88797425a2dfc29e2603efc4c5c5d6456577351fbd74219b2</u> <u>2a45477b39033fa</u>
- Tainter. J.A. (1995). Sustainability of Complex Societies. *Futures.* 27 (4). Pp. 397-407. ON CANVAS.

Recommended

 BPA. (2023). News Articles and Publications. PICK 1 or 2 ARTICLES TO READ: TC-25 Tariff Proceeding (6 Nov) <u>https://www.bpa.gov/about/newsroom/newsarticles</u>

Course Policies

Grading Scale

Your grade will be calculated using the following scale. Grades with plus or minus designations are at my discretion.

Letter	Grade	Description	Learning Outcome
Grade	Point		
Α	4.0	Complete mastery of course material and	Insightful
		additional insight beyond course material	
В	3.0	Complete mastery of course material Proficient	
С	2.0	Gaps in mastery of course material; not at Developing	
		level expected by the program	
U	0	Unsatisfactory	Ineffective

Grading Details

Letter	Range	Letter	Range
Grade		Grade	
А	93-100	C+	77-79
A-	90-92	С	73-76
B+	87-89	C-	70-72
В	83-86	Let's talk	<70
B-	80-82		



Chat GPT (etc) policy: Yes, you can use Chat GPT! But you need to use it as a starting point, not a finished product. Let's face it: Chat GPT can be wrong, really dry and imprecise, and boring (and biased). <u>And you need to cite it</u>. If you are going to cut and paste text (not encouraged) from ChatGPT then it needs to be indented and italicized like this:

"Guidelines for Using Chat GPT:

- 1. Use as a Supplementary Tool: Chat GPT should be considered a supplementary tool to enhance your research process. It is not a substitute for your own intellectual engagement and analysis. It should complement your own ideas and not dominate the narrative.
- 2. **Citation Requirement:** If you choose to incorporate insights or text generated by Chat GPT into your paper, it is crucial to provide appropriate citation. This helps maintain academic integrity and acknowledges the contribution of this tool to your work.

Example Citation:

For instance, if Chat GPT provides a helpful summary of a complex concept, you might cite it as follows:

According to the insights provided by Chat GPT, "quote from Chat GPT output" (OpenAI, Year)."

OpenAl, 25 September, 2023

Please email or talk to me with questions about Chat GPT.

- <u>Late work.</u> Late work is accepted, but you must notify me PRIOR to it being due, otherwise it will result in a penalty for tardiness of one full letter grade. This is done for equity reasons to level the playing field for those who manage to turn their work products in on time.
 - Incompletes are granted in the case of hardship but must be arranged prior to the end of last course session (Week 11).
- <u>Attendance.</u> Students are expected to attend all classes. Students who are unable to attend class must seek permission for an excused absence from me or my teaching assistant. <u>Per department policy each unapproved absence will result in a ½ lower grade for the course.</u> If a student has to miss a class, they should arrange to get notes from a fellow student and is strongly encouraged to obtain the missed material.
 - If you observe a religious occasion on the same day as class, please let me know prior to the day of observance.

Learning expectations

Everyone is speaking on behalf of themselves as an individual, and not as a representative of their work (unless otherwise noted).

- <u>Be civil:</u> All discussions will be professional and not personal. If you have concerns about the class dialogue, please see me immediately, don't let issues with your classmates (or professors) fester.
 - Statements made in class by students and guest lecturers are



assumed to **represent their opinion** (unless otherwise stated) and not any organization that they may work for.

- Do not post any material from this course on a public-facing website without my approval.
- <u>Emotional subject matter</u>: This class contains analysis of topics that can bring forth emotional responses. Graduate school is not a twitter feed that one can scrutinize for PC-ness.
 - We want to build a strong container for the class so that students feel comfortable sharing their experiences and perceptions. Please support each other and me in building and maintaining the container! I tend to fall back on evidence-based arguments so keep me on track to elevate lived-experiences too!
- We will be recording the Zoom sessions for later review and integration
- Some (unfortunately) don'ts: Students <u>are not</u> to multi-task with extra-curricular activities during class.
 - Please do not surf the web or answer emails during class
 - Try to save your Zoom fatigue allotment for our class!
 - Turn off your video only for personal responsibilities or if you are emotionally exhausted.
- Maintaining Confidentiality: Class discussions benefit greatly when professional experiences and actual situations are incorporated to illustrate key issues. When discussing personal/professional experiences, students should avoid, insofar as possible, revealing the identities of colleagues or others whose confidentiality may be compromised in the course of the discussion. All students participating in class discussions should similarly maintain the confidence of their peers' experiences that are shared in the spirit of academic discourse.

• How to be successful in this class

Build on the readings with <u>active studying</u>, to integrate the material with your experiences and existing understandings. Then, you will be ready to ask questions (draft these prior to class to reduce stress about asking them).
 Complete ALL the assignments.

3) Communicate with me about any barriers you are having in the class.

More Resources

Accommodations for Students with Disabilities: PSU values diversity and inclusion; we are committed to fostering mutual respect and full participation for all students. My goal is to create a learning environment that is equitable, useable, inclusive, and welcoming. If any aspects of instruction or course design result in barriers to your inclusion or learning, please notify me. The Disability Resource Center (DRC) provides reasonable accommodations for students who encounter barriers in the learning environment. If you have, or think you may have, a disability that may affect your work in this class and feel you need accommodations, contact the Disability Resource Center to schedule an appointment and initiate a conversation about reasonable



accommodations. The DRC is located in 116 Smith Memorial Student Union, 503-725-4150, <u>drc@pdx.edu</u> or <u>https://www.pdx.edu/drc</u>

If you already have accommodations, please contact me to make sure that I have received a faculty notification letter and discuss your accommodations. Please be aware that the accessible tables or chairs in the room should remain available for students who find that standard classroom seating is not useable.

• <u>Mental Health Resources:</u> Graduate school is a context where mental health struggles can be exacerbated. If you find yourself struggling, please ask for help. If you wish to seek out campus resources, here is some basic information about mental health resources at PSU: <u>https://www.pdx.edu/shac/counseling</u>

<u>Title IX Discrimination and Harassment Policy</u>: As an instructor, one of my responsibilities is to help create a safe learning environment for my students and for the campus as a whole. We expect a culture of professionalism and mutual respect in our department and class. You may report any incident of discrimination or discriminatory harassment, including sexual harassment, to either the Office of Equity and Compliance or the Office of the Dean of Student Life.

• Please be aware that as a faculty member, I have the responsibility to report any instances of sexual harassment, sexual violence and/or other forms of prohibited discrimination. If you would rather share information about sexual harassment or sexual violence to a confidential employee who does not have this reporting responsibility, you can find a list of those individuals. For more information about Title IX, please complete the required student module Creating a Safe Campus in your Canvas.

