PUBP 6352: Utility Regulation and Policy (CRN: 94539)

Tuesday/Thursday 12:30-1:45pm in DM Smith 002:
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Instructor: Regents Professor Marilyn A. Brown, CEM, NAS, NAE, AAAS
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Office Hours: TTh 2-3 pm (confirm in advance**;** other times, by appointment)

Most classes will be in person, but some will be on-line, particularly for remote guest speakers. Microsoft Teams will be used to connect to the class when the professor and/or guest speaker is remote.

Course Description

Energy systems are transforming worldwide. This course will focus on the governance, policies, and market forces that impact the transition to a low-carbon electric grid. It will introduce you to the concepts of utility regulation in the United States, particularly as they apply to the electricity industry. Topics will include integrated resource planning, rules around solar power and storage, solutions on the consumer side of the meter, as well as demand-side management, rate setting, energy affordability, and more. We will also discuss the role of the electric grid in adapting to climate change, and the challenge of providing reliable and secure electricity.

Course Modality

Most lectures will be in person, in DM Smith Room 002. Work with a classmate to access lecture notes if you miss a class for any reason.

Learning Objectives

By successfully finishing the course students will be able to:

(1) Explain and define the concepts of utility regulation of the electric industry in the United States, and selected approaches used in other countries.
(2) Understand integrated resource planning (IRP), how stakeholders engage in IRPs, and relevant regulations in Georgia and other U.S. states.
(3) Identify the electric industry structure: ownership, control, regulation, and regulatory bodies, and measures of reliability and resilience.
(4) Estimate the levelized cost of electricity (LCOE) for a specific electricity generation option using tools and databases such as S&P Capital IQ Pro.
(5) Understand and explain renewable portfolio standards, utility rate setting and structures, tariffs, carbon credits, and environmental compliance costs.
(6) Understand how to analyze energy legislation and energy policies.

Students will learn how to use analytical tools & data sources to assess the cost-effectiveness of alternative energy technologies and policies.

The following two assignments will be used to focus our analytics on specific questions of immediate policy relevance:

A. Examine a major electricity supply- or demand-side project completed in the U.S. Southeast between 2010 and 2026. Use the levelized cost of electricity (LCOE) concept to estimate its cost effectiveness. Data sources such as from the S&P Capital IQ Pro platform or EIA data to analyze the costs and benefits of the project and to thereby estimate its cost-effectiveness. Include an assessment of other aspects of the project, such as its likely impacts on rates and reliability, and energy affordability.
B. Analyze data from EIA and the GT-National Energy Modeling System (GT-NEMS) or the RMI Energy Policy Simulator to assess an energy policy (or suite of policies) in the U.S. Southeast. Compare the results with impacts of the same policy(ies) in other U.S. regions or other states.

Teams of ~4 students will write short Research Memos for both assignments (~3,000-word reports). Both Research Memos will be written by teams of ~4 students. Team membership should be different between topics A and B.

Classes will benefit from guest presentations and discussions by subject experts. Your attendance is important throughout the course, but especially when guests are lecturing.

Instructional Strategies

This is a discussion-based seminar course. Students are expected to have strong written and oral communication skills and experience with data analysis. Prior knowledge of electric utility regulation and policy is not necessary.

Course Grading

Assessment and Grading

A>90; B>80; C>70; D>60

Grading Policy:

- Attendance and participation: 5%. Attendance will be taken by the instructor.
- Three in-class, closed book quizzes: 15%, 15%, 15%. The quizzes are in class and closed book and notes.
- Research memo 1: 25% total (10% for voiceover PPT; 5% for an anonymous peer evaluation of another team's PPT, 10% for final memo).
- Research memo 2: 25% total (10% for voiceover PPT; 5% for an anonymous peer evaluation of another team's PPT; 10% for final memo).

Each 20-minute voiceover PPT presentations should be submitted on Canvas by one team member two days before the day it is to be presented.

Use the Google sheet found here to identify your two teams and research topics.

Team Voiceover PPT Presentations of Memo 1 and 2 (15%)
Student teams will describe the results of Research Memos 1 and 2 in 20-minute presentations using a voiceover PPT.

You will be assigned to watch and comment in a 250-500 word summary on both PPTs. **(5%)**

We will discuss these voiceover PPTs during class. Students should watch the PPTs before they are covered in class so that we can spend our time in class discussing them. Submit your comments on Teams before the class PPT presentation.

Research Memos 1 and 2: Submit a Research Memo of ~2000 words – as **a word document and not a pdf (15%).** Canvas will have further instructions.

Assignments and Due Dates

For all assignments, pay attention to the analytics and mechanics: both quantification and visualization count, as do concepts and frameworks. Produce professional documents with fully documented tables and graphics using professional layouts. Format, grammar, punctuation, spelling, and sufficient and accurate citations all count.

- It matters that you know how to reference documents, both the format for an in-text citation and the format for the reference list. Use a standard referencing style such as those provided in Paperpile or Zotero.
- Turn on your spellchecker. Proof your text. Your goal is to have no "proofreading error" markups in the commented version returned to you.
- All assignments should be submitted as Word documents (.docx), using 1" margins and 11-point font sizes or as a PPT (not pdf). You can use Canva in Class, but submit the file as a PPT.

Research Memo 1..... 10/20/2026
Research Memo 1..... 10/29/2026

Voiceover PPT posted on Canvas 12/01/2026
Discussion of Research Memo 2 Voiceover PPT Presentation 12/01-03
Feedback on Voiceover PPT Presentation submitted before each class above.
Research Memo 2 is due on **December 10th**
There will be no final exam.

Submission Mechanics:
All written assignments are to be submitted in Canvas. Late assignments will result in discounted grades.

Communications:
Please use your GA Tech email account for course communications and post all assignments on Canvas. Copy teaching assistant Snehal Kale on all e-mails.

Rights and Responsibilities
Enrollment in this course indicates that you have read, acknowledge and agree to abide by the following:

- Policy on academic performance and incompletes - see Georgia Tech Student Handbook.
- Georgia Tech Honor Code - including Addendum for Graduate Students. Student papers may be reviewed by plagiarism detection software.

Absences
Enrollment for the course indicates that you agree to attend all scheduled classes. Most classes will be in person. Some will be on-line, but synchronous. Absences from class may be forgiven for good reason—send me an e-mail with "Absence from class" in the subject line. Absences beyond this may result in a lower final grade.

Honor Code

The Academic Honor Code is a student initiative that became an official Institute policy in 1996. The objective of the Academic Honor Code is to increase academic integrity and strengthen trust in the Georgia Tech community. Students enrolled at Georgia Tech signed an agreement acknowledging their awareness of the Academic Honor Code. They are strongly encouraged to seek a full understanding of their instructors' expectations regarding academic honor. You can find the Honor Code (with a listing of responsibilities in Sections 3 and 4) at http://www.policylibrary.gatech.edu/student-affairs/academic-honor-code

Disability Services: Your experience in this class is important to me. If you have already established accommodations with the Offices of Disability Services, please communicate your approved accommodations to me at your earliest convenience so we can discuss your needs in this course. If you have not yet established services through Disability Services, but have a temporary health condition or permanent disability that requires accommodations (conditions include but are not limited to: mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact Disability Services at 404-894-2563 or dsinfo@gatech.edu or disabilityservices.gatech.edu. Disability Services offers resources and coordinates (with students and their instructors) reasonable accommodations for students with disabilities and/or temporary health conditions.

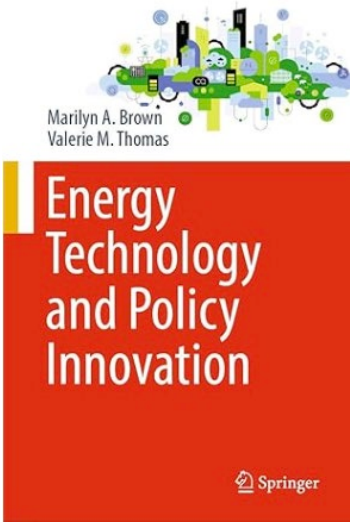
Use of AI: You may not use CHAT GPT or other AI tools to write your assignments.

Inclusive Excellence: The Ivan Allen College of Liberal Arts supports the Georgia Institute of Technology's commitment to creating a campus free of discrimination on the basis of race, color, religion, sex, national origin, age, disability, sexual orientation, gender identity, or veteran status. We further affirm the importance of cultivating an intellectual climate that allows us to better understand the similarities and differences of those who constitute the Georgia Tech community, as well as the necessity of working against inequalities that may also manifest here as they do in the broader society.

Required Reading Materials

Required reading materials will be drawn from *Energy Technology and Policy Innovation* (Springer-Nature).

ISBN-10 3032070759, Edition 1, 610 pages. ~$54.99 and available on-line free for Georgia Tech students.



Course Schedule

Utility Regulation & Energy Transitions

Calendar of topics:

Week	Date	Topic
1	**August 25**	Review of syllabus and assignments Ch. 1 – Introduction to Key Questions and Concepts
	August 27	Ch. 3 – U.S. Energy Production, Consumption, and Emissions
2	**September 1**	Ch. 10 – Governance of the Electric Grid Ch. 11 – Grid Reliability, Resilience, and Security
	September 3	Levelized Cost of Electricity
3	**September 8**	**Intro to "S&P Capital IQ Pro" Electricity Database – Garrett Devine,** Guest Presenter and Short Intro to S&P Capital IQ Pro – ON-LINE CLASS confirmed. "A new-user overview of energy data on the platform, leaving time for a Q&A session afterwards."
	September 10	Ch. 7 – Market Failures and Policy Solutions Ch. 8 – Push and Pull: Energy Markets and Consumer Choice
4	**September 15**	**IN-CLASS ASSESSMENT 1** Ch. 39 – Integrated Resource Planning
	September 17	**Reflections of the 2026 Georgia Power *Integrated Resource Plan* and Rate Case: Benjamin Deitchman (Georgia Public**

		Service Commission) and Katie Southworth (Corporate Energy Buyers Association)
5	**September 22**	Ch. 15 – Fossil Fuel Subsidies and Regulations
	September 24	Ch. 17 – Nuclear Power: Mega Projects and Small Modular Nuclear Reactors
6	**September 29**	Climate Solutions Game
	October 1	Ch. 13 – Policies to Promote Renewable Energy
7	**October 6**	**Fall Recess**
	October 8	**IN-CLASS ASSESSMENT 2** Ch. 22 – Energy in Industry
8	**October 13**	Ch. 21& 23 – Energy Policies for Buildings and Industry
	October 15	Ch. 26-28 Energy Resilience, Carbon Mitigation and Adaptation
9	**October 20**	Ch. 29 – The Role of the Courts and the U.S. Clean Air Act Ch. 30 – International Accords and the Paris Agreement
	October 22	Policy Mixes for Energy Transitions, Impact of Carbon Pricing (Cap and Trade vs Taxes) on the U.S. Electricity Sector, The Clean Power Plan and West Virginia vs. EPA 2022
10	**October 27**	Regional Greenhouse Gas Initiative (RGGI) Drawdown Georgia and EIA's National Energy Modelling System (NEMS)
	October 29	Ch. 31 – Corporate Sustainability and the Environmental, Social, and Governance (ESG) Framework
11	**November 3**	Ch. 40 – Equitable Policies and Pathways
	November 5	Overview of the Energy Information Administration's National Energy Modeling System
12	**November 10**	Overview of the Rocky Mountain Institute's Energy Policy Simulator

	November 12	*Submit peer review of another Team's Presentation* of Research Memo 1 by 11:59 pm Watch and discuss voiceover PPTs of Research Memo 1
13	**November 17**	*Submit final Research Memo 1* by 11:59 pm
	November 19	**Reliability, Terrorism, Cyber Security, and Data Centers: Mark Lauby (North American Electric Reliability Corporation)**
14	**November 24**	No Class—Work on Research Memo 2
	November 26	No Class--Thanksgiving
15	**December 1**	Final Class: Overview of Water Regulation and Policy
	December 3	**IN-CLASS ASSESSMENT 3** Work on finalizing Research Memo 2
16	**December 8**	Submit peer review of another Team's Presentation of their Research Memo 2 by 11:59 pm, Watch and discuss voiceover PPTs of Research Memos 2.

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review Georgia Tech's Honor Code and the student Code of Conduct.

Any student suspected of cheating or plagiarism on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services (404-894-2563) as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Student-Faculty Expectations Agreement

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. The Student-Faculty Expectations articulate some basic expectations that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Extensions, Late Assignments, & Re-Scheduled/Missed Exams

Late assignments will be penalized accordingly. Make-up assessments are given for illness, approved Institute activities or religious observances.

Guest speaker schedule

#	Date	Guest Speaker	Designation/Organization	Topic	Format (In-class/virtual)
1	9/8	Garrett Devine	S&P Global	Intro to "S&P Capital IQ Pro" Electricity Database	Virtual
2	9/17	Dr. Benjamin Deitchman and Katie Southworth	Georgia Public Service Commission	Reflections of the 2026 Georgia Power *Integrated Resource Plan* and Rate Case	TBD
3	11/19	Mark Lauby	Senior Vice President, North American Electric Reliability Corporation (NERC)	Reliability, Terrorism, Cyber Security, and Data Centers	In-person