Instructor:

Kenneth G. (“Ken”) Hurwitz, a Washington D.C. attorney, has practiced law in the energy field for over 40 years. For approximately 20 years, he was equity partner at two large international law firms, VENABLE, LLP and HAYNES AND BOONE, LLP. From 1983 to 1987, he served as Executive Director of the Maryland Public Service Commission. Ken holds J.D. and M.B.A. degrees from the University of Pennsylvania Law School and the Wharton School. A well-known energy lawyer, Ken has spoken at numerous industry and bar association conferences around the country.

Ken can be contacted by phone at (202) 669-4511 or by email at khurwit1@jhu.edu. Email messages will be returned, either by reply email or follow-up phone call, within 24 to 48 hours.

Course Description:

*Introduction to Energy Law and Policy* brings together the physical world of natural resources, the technology of energy production and delivery, the economics that drives the behavior of producers, transporters and consumers, and the existing body of laws and regulations. The course is tailored for those who wish to work in the field and those who wish to enhance their understanding of this fascinating, critical subject.

The course will be structured into two parts. The first part is designed to provide an understanding of the legal and regulatory framework that governs the U.S. energy sector. We start with basic principles of constitutional and administrative agency law, including judicial review of agency decisions. The course then examines the fundamental regulatory concepts
and approaches that apply in the energy sector, with an emphasis on utility, common carrier and competitive market models. The first part of the course will conclude with an examination of environmental regulation of air quality. Throughout, key concepts and themes will be identified and explained.

The second part of the course explores a number of pressing energy topics, including the role of renewable energy in the electric generation mix, safety regulation of high-risk infrastructure (offshore deepwater oil exploration and production; nuclear power plant generation; pipeline transportation), the unconventional oil and natural gas revolution (hydraulic fracturing), and vehicular transportation. Existing regulatory policy and attempts by the current administration to reverse initiatives that were undertaken in prior years will be addressed. Along the way, the student will be encouraged to critically evaluate existing laws and regulations, to ask whether they are rational in light of their stated policy goals, and to think about potential reform.

For each topic discussed in Part Two, this course will provide:

- A brief “In Context” section to frame the issue in terms of the overall energy system.
- A description of the pertinent technology.
- A survey of the major laws, regulations and judicial decisions relevant to the topic.
- A review of the issues in contention at this time.
- An exploration of likely, future contentious issues.

Finally, it should be recognized that this course is an introduction to a subject that is vast and complex. The goal is not to be comprehensive, but to provide a framework for understanding energy law and policies. Students should gain an increased ability to explore and understand this hugely significant subject as they continue down their chosen career paths.

**Course Goals and Learning Outcomes:**

In addition to gaining an increased understanding of energy law and policy and ability to explore issues in depth, students should, as a result of taking this course, be able to:

- Understand the respective roles of key laws, agencies, and regulatory bodies in the functioning of different parts of the energy system and market and the conflicts that arise between different laws, policies, and actors;
- Understand how contemporary and emerging energy and environment issues and policies fit within, or conflict with, the framework of energy law.
- Understand different perspectives and approaches to each issue, particular those that may contradict their own.
- Discuss the benefits, problems, major laws and policies associated with different energy sources and different components of the energy system
- Analyze the merits of arguments advanced by energy advocates and parties to legal challenges to energy laws.

**Teaching Style:**

The course will be delivered primarily through lectures, reading, and discussion; it will be comprised of 14 classes, referred to below as "Modules."
Reading assignments will include “core” text plus “choice” texts. Everyone will read “core” texts and may select among “choice” texts according to their interests. Core texts are marked with a double asterisk (**) in the “Assignment” sections below; please note that most of the reading is required.

Lecture portions of the class will be interspersed with discussion portions to engage students in each part of the subject matter. Class participation is encouraged; it is hoped that the classroom will be a stimulating and non-threatening environment.

There will be three take-home exams, consisting of short answer and short essay questions. Students will be asked to set aside three hours of “quiet time” for each exam; it is permissible to refer to course materials, if the student so desires. The exam must be completed within four days of distribution. The student will be asked to indicate, in advance, the time frame during which the exam will be taken.

Exam papers are to be submitted by email to khurwit1@jhu.edu, with the following subject line: "JHU _____ (First or Second or Third) Exam." Exam papers should be submitted in two formats, as an editable WORD document and as a PDF. The goal of having three exams is to reinforce the course materials and class sessions, and to test the student's understanding of key concepts and policy issues, as the course proceeds. As indicated below, exams will be distributed at the close of class for Module Nos. 5, 9 and 14.

Please review the course syllabus thoroughly to learn more about course coverage and requirements.

II. COURSE MATERIAL

Readings:

- **Textbooks:**


  These are useful textbooks but they do not cover many important aspects of the course which will be covered by other materials. These materials, which will be posted on Blackboard, are referred to herein as “Posted Reading.”

- **Other:** Includes electronic readings on the course Blackboard site, under the “Readings” tab and online hyperlinks (accessed via the online version of the Syllabus on the course Blackboard site, under the “Syllabus” tab).

- **News:** Students are expected to keep abreast of major energy news and in-class and online discussions may include some element of “did you read the news that . . .”

- **Podcasts:** There are a number of podcasts that students may find valuable, including The Energy Gang, The Interchange, Grid Geeks, and Columbia Energy Exchange
Specific Technology Requirements & Skills for this Course:

- Students need to be able to: Navigate in and use Blackboard; the Blackboard Student Orientation course on your "My Institution" page
- Create and save MS WORD and ADOBE documents; see MS Word training and tutorials for PC users (all versions); Word Help for Mac users
- Find basic resources on the Internet
- Create and organize files and folders on your computer
- Send, receive, and manage email

III. CLASSES, TOPICS AND ACTIVITIES

MODULE 1
Framing Energy Law and Policy

Topics:
- Review of Syllabus
- Recurring Themes in Energy Law
- The Goals of U.S. Energy Policy
- Economic Drivers of Energy Policy
- Government Intervention in its Various Forms

Assignments:
- **Nutshell, Chapter 2
- **Energy Law, pp. 1-7 (up to V.)
- Posted Reading
  - **Energy, Economics and the Environment, pp. 1-24

MODULE 2
The Administration of Energy Law and Regulation

Topics:
- Constitutional Principles
  - State Police Power
  - Congress’s Commerce Power
  - Dormant Commerce Clause
  - Federal preemption and Supremacy Clause
- Basic Administrative Agency Concepts and Procedure
  - Statutory Authority for Agency Action
  - Agency Adjudication and Rulemaking
  - Deference and Judicial Review
  - Anatomy of a Rulemaking—From Promulgation to Rescission

Assignments:
- **Nutshell, Chapter 3
- **Energy Law, pp. 7-12
- Posted Reading:

MODULE 3
Natural Monopoly, Public Utilities, and Competition

Topics:
- Natural Monopoly Rationale for Public Utility Regulation
- State Utility Commission Jurisdiction (Electric and Gas Utilities) and its Limits
- Basics of Public Utility Ratesetting and Ratesetting Procedure
- Competitive Retail Suppliers and Default Service Rates
Assignments:
- "Nutshell, Chapter 4 (165-97, 203-205)
- Posted Reading:
  - "Munn v. Illinois, 94 U.S. 113 (1877)
  - "Energy, Economic and the Environment, pp. 1467-69 (FPC v. Hope Natural Gas)

**MODULE 4**
*Regulation by the Federal Energy Regulatory Commission (FERC)*

Topics:
- FERC’s Jurisdiction Under the Federal Power Act, the Natural Gas Act and the Interstate Commerce Act
  - Just and reasonable rate requirement
- Electric Industry Restructuring: Open Access Transmission and Markets
- Restructuring of Interstate Natural Gas Pipeline Regulation
- Oil Pipeline Regulation
- Wrapping Up: Has FERC Achieved its Policy Goals?

Assignments:
- "Nutshell, Chapter 6
- "Energy Law, pp. 167-181
- Posted Reading:
  - "Energy, Economics and the Environment, pp. 588-594

**MODULE 5**
*Air Quality Control under the Clean Air Act*

Topics:
- Regulating Stationary Sources
- Attaining and Maintaining the NAAQS through State Implementation Plans
- The Cap and Trade Approach: Acid Deposition Control Program for SO2
- Massachusetts v. EPA: EPA Authority to Regulate GHG Emissions
- Mobile Source Regulation
- Wrapping Up: Is the Clean Air Act an Appropriate Vehicle for Regulating GHGs?

Assignments:
- "Energy Law, pp. 110-127
- Posted Reading:

**FIRST EXAMINATION, COVERING MODULES 1 THROUGH 5**

**MODULE 6**
*Renewable Energy I—Laying the Groundwork and Introduction to Wind Energy*

Topics:
- Basic Power System Operations: Matching Generation to Load
- Intermittency versus Dispatchability
- Environmental Benefits of Renewable Energy
- Renewable Purchase Mandate: Renewable Portfolio Standards
- Introduction to Wind Generation
  - Wind Turbine Technology
  - Energy Production Patterns and Capacity Value
  - Siting and Environmental Issues
Assignments:
- **Energy Law**, pp. 149-52
- **Nutshell**, pp. 538-42; 564-65

Posted Reading:
- U.S. Renewable Portfolio Standards—2017 Annual Status Report (download at rps.lbl.gov)
- Surviving the Commerce Clause: How Maryland Can Square its Renewable Energy Laws with the Federal Constitution (available by “googling” the title)

MODULE 7
Renewable Energy II—Wind (continued) and Solar

Topics:
- Wind Development Incentives: Production Tax Credit and Investment Tax Credit
- Development of a Wind Farm: From Cradle to Grave (Decommissioning)
- Solar Technology: Photo Voltaic Panels and Concentrated Solar
- Solar Energy Output and Capacity Value
- Solar Development Incentives and Disincentives
- Net metering: Maryland Case Study
- Development of a Utility-Scale Solar Farm
- Siting and Environmental Issues

Assignments:
- **Nutshell**, 535-38

Posted Reading:
- On Rooftops, a Rival for Utilities, N.Y. Times, July 16, 2013, (available by googling title of article)

MODULE 8
High-Risk Energy Infrastructure; Controlling Safety Risk

Topics:
- Offshore Drilling in the Outer-Continental Shelf: Risk versus Reward
- The 2010 Deepwater Horizon Disaster: Root Causes
- Industry and Regulatory Responses to Deepwater Horizon Disaster
- New Department of Interior Draft 2019-2024 Five Year Leasing Program
- Other Risk and Reward Cases
  - The Domestic Pipeline Industry
  - Oil by Rail
  - Nuclear Power

Assignments:
- **Energy Law**, pp. 57-61; 90-96
- **Nutshell**, 464-71; 475-81

Posted Reading:
- **Video, Overview on Deep Water Drilling; https://www.youtube.com/watch?v=YQtDiX2Dbro0**
- **Video, BP Oil Spill Timeline, https://www.youtube.com/watch?v=Qif-X-Ez9Bs**
- Video, BP Spills Coffee, Parody: https://www.youtube.com/watch?v=2AAa0gd7CIM
- **Energy, Economic and the Environment**, pp. 201-203; 219-222; 230-256
- January 2011, Report to the President, National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling; Deep Water: The Gulf Oil Disaster and the Future of Offshore Drilling, pp. 1-19 (skim); 250-260, 293-300
MODULE 9
The Unconventional Oil and Natural Gas Revolution: Policy and Law

Topics:
- Reaching and Optimizing Shale Formations: Hydraulic Fracturing and Horizontal Drilling
- Rapid Expansion of Domestic Natural Gas and Oil Production and its Implications
- The Environmental Benefits and Risks
- The 2016 EPA Study: The Risk to Drinking Water Resources
- Federal "Abstention" and Exemptions
- State and Local Regulation of Unconventional Drilling Activity and State Preemption of Local Requirements
- Can Fracking's Negative Impacts be Controlled or Mitigated?

Assignments:
- Posted Reading:
  - **EPA, Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States (2016); Executive Summary, ES1—ES46. www.epa.gov/hfstudy

SECOND EXAMINATION, COVERING MODULES 6 THROUGH 9

MODULE 10
Vehicular Transportation, and Federal Government Attempts to Increase Vehicle Efficiency and the Use of Renewable Fuels

Topics:
- Measuring and Comparing Vehicle Efficiency
- Regulation and Use of Biofuels: The Renewable Fuel Standard (RFS)
- Evaluation: Does the RFS Yield Environmental Benefits?
- The Federal Corporate Average Fuel Economy (CAFÉ) Standards
- Electric and Plug-In Hybrid Cars
- Environmental Aspects of Electric Cars: EEVs (*Emissions Elsewhere* Vehicles)

Assignments:
- **Energy Law, pp. 111-19, 154-57
- **Energy, Economics and the Environment, pp. 1024-1065
- Posted Reading:
  - **Klass and Heiring, Symposium: The Post-Carbon World: Advances in Legal and Social Theory: Life Cycle Analysis and Transportation Energy
  - Reitze, Biofuels—Snake Oil for the Twenty-First Century, 87 Oregon Law Review 1183

MODULE 11
Open Access Electricity Transmission, Regional Transmission Organizations, Centrally-Regulated Competitive Auction Markets, and Picking Winners and Losers

Topics:
- Open Access Electricity Transmission: RTO and Non-RTO
- Least Cost Security Constrained Dispatch and Locational Marginal Pricing (LMP)
- RTO Competitive Energy and Capacity Auction Markets
- Picking Winners and Losers
Assignments:

- **Energy Law**, pp. 74-85
- Posted Reading:
  - **PPL Energyplus, LLC v. Nazarian**, 974 F.Supp.2d 790 (2013) (U.S.D.C., District of Maryland), Section II. C (and all subsections of C) (up to Section D)
  - **Resiliency: The Electric Grid's Only Hope**, House of Representatives, Hearing before the Committee on Science, Space, and Technology, Serial No. 115-99 (Oct. 1, 2017); Opening Statements of Hon. Lamar Smith and Hon. Marc Veasey

**MODULE 12**

*The Demand Side: Reducing Electricity Consumption and Shifting Load*

Topics:
- Basic Concepts: Reduction of Energy Consumption, Peak Load Reduction and Load Shifting
- Removal of Ratemaking Constraints
- State Energy Conservation Programs
- "Wholesale" Demand Reduction
  - **FERC Order No. 745**
- Smart Grid and Smart Meters: Optimizing Supply and Demand

Assignments:

- **Energy Law**, pp. 211-25
- Posted Reading:
  - **What is the Smart Grid?**, SMARTGRID.GOV, https://www.smartgrid.gov/the_smart_grid/smart_grid.html

**MODULE 13**

*Climate Change, Clean Power Plan, and Paris Climate Accord*

Topics:
- Climate Change Simplified
- Regional/State Cap-and-Trade Approaches: Regional Greenhouse Gas Initiative and California's AB 32
- EPA Regulation of New Stationary Sources: **Utility Air Regulatory Group v. EPA** (Tailoring Rule/Prevention of Significant Deterioration) and Coal Baseload Power Standard
- Clean Power Plan and Existing Stationary Sources (U.S. Power Sector)
- Paris Climate Accord: Political Agreement versus Treaty
- Paris Climate Accord: Central Concepts
- U.S. Withdrawal from Paris Climate Accord

**MODULE 13** (continued)

Assignments:

- Posted Reading:
MODULE 14
Microgrids, Distributed Energy Resources, Restoring Power to Puerto Rico, and Bringing Power to Sub-Saharan Africa

Topics:
- Characteristics of Distributed Energy Resources and Microgrids
- Benefits of Distributed Energy Resources and Microgrids
- Interaction of Microgrids with the "Macrogrid"
- Legal Constraints to Development of Microgrids
- Examples of Microgrids
- Role of Microgrids in Restoring Power to Puerto Rico and Bringing Power to Sub-Saharan Africa

Assignments:
- **Energy Law, pp. 228-31
- Posted Reading:

THIRD EXAMINATION, COVERING MODULES 10 THROUGH 14

IV. ASSESSMENT

First Examination 250 points
Second Examination 250 points
Third Examination 250 points
Participation in Class Discussions1 250 points
Total 1,000 points

V. GRADING POLICY

Points/Percentage Grade
98-100 A+
93.5 - 97.9 A
90.0 - 93.4 A-
88.0 - 89.9 B+
83.5 - 87.9 B
80.0-83.34 B-
70.0 -79.9 C
<70 F

VI. COURSE POLICIES

1 The grade for class discussion will be subdivided into two parts. A maximum of 150 points will be allocated based on the student’s level of participation; a maximum of 100 points will be allocated based on the quality of the student’s contributions to class discussions.
General: This course adheres to all University policies described in the academic catalog. Please pay close attention to the following policies:

Students with Disabilities: Johns Hopkins University is committed to providing reasonable and appropriate accommodations to students with disabilities. Students with documented disabilities should contact the coordinator listed on the Disability Accommodations page. Further information and a link to the Student Request for Accommodation form can also be found on the Disability Accommodations page.

Ethics & Plagiarism: JHU Ethics Statement: The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. Ethical violations include cheating on exams, plagiarism, reuse of assignments, improper use of the Internet and electronic devices, unauthorized collaboration, alteration of graded assignments, forgery and falsification, lying, facilitating academic dishonesty, and unfair competition. Report any violations you witness to the instructor.

Read and adhere to JHU’s Notice on Plagiarism.

Dropping the Course: You are responsible for understanding the university's policies and procedures regarding withdrawing from courses found in the current catalog. You should be aware of the current deadlines according to the Academic Calendar.

Getting Help: You have a variety of methods to get help on Blackboard. Please consult the resource listed in the "Blackboard Help" link for important information. If you encounter technical difficulty in completing or submitting any online assessment, please immediately contact the designated help desk listed on the AAP online support page. Also, contact your instructor at the email address listed in the syllabus.

Attendance Policy: I do not have an attendance policy. I of course encourage students to attend whenever possible, but understand that travel and other schedules may conflict. You are responsible for submitting any work due on time or arranging plans with me. For more than three absences, some makeup work may be required to avoid losing participation points.

Late Work Policy: All assignments are assigned a due date and time (typically 6:00 p.m. before a class). Late submissions will have their score reduced by 10% of total available points for each day they are late, to a minimum of 50%. Assignments cannot be accepted more than 2 days after the date of the final class.

Course Etiquette: This class benefits from open and lively discussion. That relies on an atmosphere of strong respect between all course participants.