

Energy Policy  
GEOG 38325/78325

Hunter College, CUNY  
Department of Geography  
Fall semester 2020

Date/Time: Monday and Thursdays 11:10 am-12:25 pm  
Course type: On-line  
Instructor: Peter J. Marcotullio  
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Office hours: Upon appointment  
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**Course description**

Energy use is required for the organization, maintenance and development of societies. At the same time, our use of fossil fuel energy sources has led to a series of challenges, including air pollution, resource depletion and climate change and justice issues. What policies enhance or discourage the use of energy and its externalities? This course is designed for undergraduate and graduate students seeking an introduction to the challenges associated with energy use and potential policies for a low-carbon, clean and lasting energy future.

The course is divided into several sections. The first section overviews energy trends at the global, regional and national levels. The second part of the course focuses on the policies for energy and resource use under climate change constraints. This section is largely for the developed world and specifically for the United States. Through an examination of sectoral policies whose main goal is to create low carbon energy systems we explore a number of policy options. The second part of the class turns to the global energy justice issues. The section examines a variety of ethical issues, through different ethical viewpoints. During this section the class examines global concerns, including those of the developed and developing worlds.

**Learning outcomes**

By the end of the semester students will be able to:

- Identify and describe the factors that influence the state and trends of the United States energy system GHG emissions
- Apply scientific methods (and models) to analyze national, state and local energy policies
- Evaluate the potential of policies, at the energy end-use sector scale, for lowering carbon emissions
- Apply critical thinking to analyze both the impacts of energy use and potential energy policy outcomes for emission reductions
- Identify the linkages between energy system development and management and social injustices, including institutional racism

**Prerequisites:** None

### **Student evaluations**

Undergraduate students are required to:

- 1) Participate in class discussions. All class discussions will be based upon readings from the two required texts and potentially extra articles provided in pdf format through Blackboard
- 2) Submit 4 policy briefs on different sectoral issues. Two policy problems will address either lower carbon or pollution externalities from energy use, through increase energy efficiencies, lower carbon intensities of fuels, and/or lower energy use. Two policy briefs will address justice issues, but may include the challenges mentioned above. All policy briefs will include the following sections:
  1. Title section including the person or entity to which the policy is addressed, the policy writer, the date and the title of the policy;
  2. Executive Summary including a briefly overview;
  3. Context or Scope of Problem section including background information on the issue of concern;
  4. Policy Alternatives section including at least 2 different policies that address the issue;
  5. Policy recommendation section including the policy of choice and why it is considered more effective, fair, efficient or some evaluation of better than the other alternative; and,
  6. Appendices and consulted sources including references.Elements 1-5 for the policy briefs can be no longer than 1000 words (2 pages single-spaced), references and appendices can go over to the next page.
- 3) Submit a detailed evidenced-based research paper on the analysis of an energy sector policy that addresses energy use, the impacts of energy use (i.e., externalities) or an ethical issue of an energy system. The paper can include a description the drivers that influence the energy use trend and the description paper should include a policy recommendation for addressing the potential challenge identified. Detailed papers can be up to 5000 word maximum, including tables, charts, graphs and references.
- 4) Present their policy papers at the end of the semester to the class

Graduate students are required to:

1. All criteria for undergraduates, but:
  - Policy briefs are at the urban scale; and
  - Individual paper projects must compare urban energy policies the two different cities from two different nations (i.e., cities in USA and China or the UK and Russia or any other combination). Graduate papers should be article length, at about 5000-8000 words

During the semester I will be giving short presentations at the start of class on how to write a research paper. These powerpoints, as all others will be posted on Blackboard. I expect students to follow the guidelines presented in these presentations.

<u>Student responsibility</u>	<u>Grade share</u>
Participation	10%
4 Policy briefs (5% each)	25%
Individual paper	50%
Presentation	15%

### **Required books**

- Hal Harvey, Robbie Orvis and Jeffrey Rissman (2018) *Designing Climate Solutions, A Policy Guide for Low-Carbon Energy*, Washington DC, Island Press, ISBN-10 1610919564
- Benjamin K. Sovacool and Michael H. Dworkin (2014) *Global Energy Justice: Problems, Principles, And Practices*, Cambridge, Cambridge University Press, ISBN-10 1107665086

### **Credit/No Credit policy**

The Credit/No Credit system based on the non-letter grades of **CR/NC**. Students may elect the CR/NC system up until the beginning of the final exam. CR/NC grades are not averaged into the GPA; course requirements are the same as in the traditional grading system. If this system is chosen, students will be given the following CR/NC grade equivalents:

Credit (CR) → Grade of A, B, or C

No Credit (NC) → Grade of D or F (cannot replace/override WU, IN, or FIN)

Students requesting grading according to this system must satisfy evaluation requirements, including participation, complete all the assignments and take the final examination.

### **Hunter College Statement on Academic Integrity**

Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures. Plagiarism, dishonesty, or cheating in any portion of the work required for this course will be punished to the full extent allowed according to Hunter College regulations.

### **ADA Policy**

In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical, and/or Learning) consult the Office of AccessABILITY, located in Room E1214B, to secure necessary academic accommodations. For further information and assistance, please call: (212) 772- 4857 or (212) 650-3230.

### **Hunter College Policy on Sexual Misconduct**

In compliance with the CUNY Policy on Sexual Misconduct, Hunter College affirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and

gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationship. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

- a. Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, on contacting the College's Public Safety Office (212-772-4444)
- b. All Other Forms of Sexual Misconduct: Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123.

CUNY Policy on Sexual Misconduct Link:

<http://www.cuny.edu/about/administration/offices/la/Policy-on-Sexual-Misconduct-12-1-14-with-links.pdf>

### **Essential class policies**

There are no incompletes given for the course with the exception of a proven medical emergency. No late exams are accepted. You will receive a grade of "0" on any exam not taken if you do not have a documented medical excuse for missing the exam. I take attendance as I believe that class participation is an important part of your grades. If you email me during the week, you can expect a return email within 36 hours. I may not answer during the weekends. Please do not bring iPods or earphones to class and do not use your cell phones or laptop computers except to take notes. Please do not bring food to class.

### **Syllabus change policy**

Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice. Any changes to the syllabus will be posted on Blackboard as well as discussed in class.

### **On line course policies**

Online courses are subject to the same CUNY policies as are in--person courses regarding academic integrity, the acceptable use of computer resources, equal opportunity and non---discrimination, sexual misconduct, workplace violence, domestic violence, and reasonable accommodations for persons with disabilities.

### **Tentative Schedule**

#### *Section 1: Introduction and Background*

This section of the class introduces students to basic concepts, trends and projected futures. It provides the basis for more detailed discussion of energy policies and energy justice, which are then examined in the second and third sections.

## Weeks 1-2: A Roadmap for reducing greenhouse gas emissions

Introduction to “greenhouse” Earth, climate modeling and the carbon cycle. This include a discussion of past climates and current attempts to project climate futures.

- Hal Harvey, Robbie Orvis and Jeffrey Rissman (2018) *Designing Climate Solutions, A Policy Guide for Low-Carbon Energy*, Washington DC, Island Press, ISBN-10 1610919564, chapters 1-3
- Benjamin K. Sovacool and Michael H. Dworkin (2014) *Global Energy Justice: Problems, Principles, And Practices*, Cambridge, Cambridge University Press, ISBN-10 1107665086, chapter 2

### *Section 2: Energy policy*

In this section we examine policies for GHG abatement and co-benefits for air pollution reduction by energy end-use sector. Policies focus on energy efficiency, and carbon intensity reductions.

## Weeks 3: The power and transportation sectors

Renewable portfolio standards, feed-in tariffs and complementary power sector policies, Vehicle performance standards, vehicle and fuel fees and feebates, electric vehicle policies and urban mobility policies

- Hal Harvey, Robbie Orvis and Jeffrey Rissman (2018) *Designing Climate Solutions, A Policy Guide for Low-Carbon Energy*, Washington DC, Island Press, ISBN-10 1610919564, chapters 4-9

## Weeks 4: The building and industrial sectors

Building codes and appliance standards, Industrial energy efficiency and industrial process emission policies

- Hal Harvey, Robbie Orvis and Jeffrey Rissman (2018) *Designing Climate Solutions, A Policy Guide for Low-Carbon Energy*, Washington DC, Island Press, ISBN-10 1610919564, chapters 10-12

## Weeks 5: Cross sector policies

Carbon pricing, R&D policies and policies for a Post-2050 world

- Hal Harvey, Robbie Orvis and Jeffrey Rissman (2018) *Designing Climate Solutions, A Policy Guide for Low-Carbon Energy*, Washington DC, Island Press, ISBN-10 1610919564, chapters 13-15

### *Section 3: Energy justice*

In this section we examine issues in energy justice. Discussion focuses on defining justice in the case of energy use, efficiency, externalities, human rights, etc., and what need to be done to meet justice claims.

## Week 6: Energy justice, and introduction

- Benjamin K. Sovacool and Michael H. Dworkin (2014) Global Energy Justice: Problems, Principles, And Practices, Cambridge, Cambridge University Press, ISBN-10 1107665086, chapter 1

Week 7: Virtue and energy efficiency

- Benjamin K. Sovacool and Michael H. Dworkin (2014) Global Energy Justice: Problems, Principles, And Practices, Cambridge, Cambridge University Press, ISBN-10 1107665086, chapter 3

Week 8: Utility and energy externalities

- Benjamin K. Sovacool and Michael H. Dworkin (2014) Global Energy Justice: Problems, Principles, And Practices, Cambridge, Cambridge University Press, ISBN-10 1107665086, chapter 4

Week 9: Energy and human rights

- Benjamin K. Sovacool and Michael H. Dworkin (2014) Global Energy Justice: Problems, Principles, And Practices, Cambridge, Cambridge University Press, ISBN-10 1107665086, chapter 5

Week 10: Energy and due process

- Benjamin K. Sovacool and Michael H. Dworkin (2014) Global Energy Justice: Problems, Principles, And Practices, Cambridge, Cambridge University Press, ISBN-10 1107665086, chapter 6

Week 11: Energy poverty, access and welfare

- Benjamin K. Sovacool and Michael H. Dworkin (2014) Global Energy Justice: Problems, Principles, And Practices, Cambridge, Cambridge University Press, ISBN-10 1107665086, chapter 7

Week 12: Energy subsidies and freedom

- Benjamin K. Sovacool and Michael H. Dworkin (2014) Global Energy Justice: Problems, Principles, And Practices, Cambridge, Cambridge University Press, ISBN-10 1107665086, chapter 8

Week 13: Energy resources and future generations

- Benjamin K. Sovacool and Michael H. Dworkin (2014) Global Energy Justice: Problems, Principles, And Practices, Cambridge, Cambridge University Press, ISBN-10 1107665086, chapter 9

Week 14: Fairness, responsibility and climate change

- Benjamin K. Sovacool and Michael H. Dworkin (2014) Global Energy Justice: Problems, Principles, And Practices, Cambridge, Cambridge University Press, ISBN-10 1107665086, chapter 10

Week 15: Student presentations (on their policy paper)