

Energy Policy GEOG 38325/78325

Hunter College, CUNY
Department of Geography and Environmental Science
Fall semester 2010
Monday and Thursdays 11:10 am-12:25 pm, room 1022HN
The course is: Web-enhanced (**W**)

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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. 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. We focus on the connections of energy use and air pollution, research use and climate change first. After identifying and describing a series of challenges students are presented with sectoral policies whose main goal is to create low carbon energy systems, but which can also address these other policies areas. The class is run in seminar fashion requiring significant student participation.

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 energy system 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
- Collect, analyze and synthesize information to inform the assessment of energy policy options
- Apply critical thinking to analyze both the impacts of energy use and potential energy policy outcomes for emission reductions

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 four policy briefs on different sectoral policies. All brief policy problems are either to lower carbon or air pollution emissions from energy use, increase energy efficiencies, lower carbon intensities of fuels, and/or lower energy use. They will include the following sections: 1) Title; 2) Executive Summary; 3) Context or Scope of Problem; 4) Policy Alternatives; 5) Policy Recommendations; and, 6) Appendices and consulted sources. Elements 1-5 for the policy briefs can be no longer than 500 words (one page single-spaced), references and appendices can go over to the next page.
- 3) Submit a detailed paper on the analysis of an energy sector policy including a description of the drivers that influence the energy use trend, the description of the policy and its intent, the potential outcome of the policy, and a discussion of opportunities and potential barriers for success. Detailed papers can be up to 5,000 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 of two different cities from two different nations (i.e., cities in USA and China or the UK and Russia). Graduate papers can be 4,000-8,000 words

Required textbooks

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 is 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. And the Credit/No Credit form must be submitted no later than the last day of classes.

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 for 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.

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 includes 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

Section 2: Energy policy

In this section we examine top policies for greenhouse gas emission (GHG) abatement and co-benefit air pollution reduction by energy end-use sector. Policies focus on energy efficiency, and carbon intensity reductions.

Weeks 5: 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 6: 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 7: Cross sector policies

Carbon pricing, Research and Development (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. Discussions focus on: 1) What is the current reality, 2) What is justice in this specific case, and 3) What need to be done to meet justice claims.

Week 8: 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 9: 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 10: 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 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: 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 14 & Final Exam Period: Student presentations (on their policy paper)