**GEO 430: Energy, History, and Society**

Fall 2016

Eggers 155

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**COURSE DESCRIPTION AND OBJECTIVE**

Energy is central to the existence of only human but all life on earth. Plants depend upon direct solar energy while many animals depend on those plants or other animals. While dependent on plants and animals like any other species for 99% of human history, about 250 years ago human societies began to take advantage of the concentrated energy of fossil fuels (coal, oil, and natural gas). On the one hand, fossil fuels have provided for incredible levels of productivity, electrification, and spatial mobility; on the other hand, the use of these fuels has led to specific social and ecological problems like air and water pollution, global climate change, and social and environmental injustice. Compounding the problem, unlike solar energy, fossil fuels are finite non-renewable resources; only the product of millions of years of geologic time it takes to congeal plant and animal matter into “fossilized” form. During the “fossil age,” humans have also developed different ways to make use of other forms of energy such as water, solar, wind, and nuclear energy. Today, we are realizing that a profound shift must take place in the ways societies use energy from fossil fuels toward “alterative” energy technologies.

In this course we will approach the societal relation to energy from a long-term historical perspective. We will read several new books in the field of energy history that cover the societal ramifications of historical transitions to coal, oil, and electricity. We will also speculate on what the future of energy will look like.

The aim of this course is for you to begin to think critically about energy in the past and future of human history. I hope you will take ideas from this course that are applicable to analyzing current events and politics, but also developing practical real-world solutions for our current energy challenges. It is a **reading intensive** course and dependent upon **substantive class participation and discussion.**

**REQUIRED TEXTS**

The following texts are available in the bookstore (Bakke and Needham are not available there yet, but are online). Other assigned articles and book sections will be scanned and made available on the course “blackboard” website.

Crosby, A.W. 2006. *Children of the Sun: A History of Humanity’s Unappeasable Appetite for Energy* (New York: W.W. & Norton Co)

Malm, A. 2016. *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*. London: Verso.

Shulman, P.A. 2015. *Coal and Empire: The Birth of Energy Security in Industrial America*. Baltimore, MD: Johns Hopkins University Press

Needham, A. 2014. *Powerlines: Phoenix and the Making of the American Southwest*

Bakke, G. 2016. *The Grid: The Fraying Wires Between Americans and Our Energy Future*. New York: Bloomsbury.

Patel, R. 2012. *Stuffed and Starved: The Hidden Battle for the World’s Food System*. New York: Melville House.

Gorz, A. 1985. *Paths to Paradise: On The Liberation from Work*. Boston: South End Press.

**ASSINGMENTS**

READING

This course is designed as an upper-level seminar. Therefore, it will be reading intensive. We will read **150** pages per week and roughly a book every two weeks. Class discussions will thrive or flounder in relation to our collective commitment to careful reading. I will begin the semester by trusting you to do the reading. However, if I feel the class is not reading, I withhold the right to introduce more disciplinary measures (e.g., pop quizzes or in-class drills) that reward the students make do the reading.

PARTICIPATION

Participation takes up a large part of your class grade. There are two important aspects of participation. (1) Coming to class and (2) Actively participating in classroom discussion. This is a small enough class where we can expect *everyone* to offer ideas, opinions, and questions that spur wider discussion. While you will be expected to participate more formally in specific moments (discussion leader, presenter), *general* participation will be graded on how you participate in classes where you are not the center of attention. In addition to in-class participation, blackboard discussion threads will also be posted to give an outlet for those students who have difficulty speaking in-class. Although online participation cannot fully replace in-class contributions, it can help your participation grade.

DISCUSSION LEADERSHIP

There are five discussion leadership groups (each with 3-4 people). Each group will take the lead on discussion for two class periods. You are free to organize discussion how you wish. But here are some options. (1) **Brainstorm on key themes.** What are the key concepts and themes of the work? How do they connect to one another? I like to do this kind of work on the board to have the class make the connections between ideas. (2) **Pose critical questions.** Come up with questions about the reading and pose them to class for discussion. What is the main argument of a chapter or the book as a whole? What are the ambiguities and silences within the argument? How did this section make you think about x,y and z? (3) **Break up class into groups and/or role playing.** Can the class be divided to talk about specific ideas or issues? Could the class be broken up into particular political positions or groups? I like assigning groups to particular roles (i.e. one group represents factory owners, the other represents factory workers) and have a “mock” debate.

FOUND OBJECTS

Starting early in the semester, every class day will begin with one of you presenting a 2-3 minute “found object” on energy and society. This could be a newspaper article, television/movie clip, or any other cultural image/media object that you can show/summarize to the class. I encourage you to try to connect your found object to the day’s topic/readings, but this is not required. You will be graded on the relevance of the “object” to overall class themes and your presentation effectiveness. This should also be considered an easy 5 points.

FIVE SHORT ESSAYS

The course has 8 parts. You will be given essay assignments for all 8, but only have to write on five of them. **You can only skip 1 out of the first 3 assignments** (you’ll thank me later). Essay questions will be distributed one week prior to the due date. They will be short (750-1,000 words). In order to effectively answer the question, you will need to make an argument *using concepts and evidence* drawnfrom course lectures and readings. All course material *must be cited* thoroughly. You may not use outside/external sources unless you are told to do so. Class items should give you plenty of material to work with.

FINAL RESEARCH PROJECT – ENERGY TRANSITIONS IN PLACE, OR….

12-15 PAGES, DOUBLE-SPACED

This is the **SUGGESTED** final research project topic. **You can choose something else, but need to get it approved by me.**

Much of this course will deal with large-scale developments at the national and global scales of analysis. This project will attempt to construct a historical narrative of the relation between energy and a particular local place/region. An obvious choice might be Syracuse, your own hometown, or another place you have a special attachment to. In order to focus your project, your research should concentrate on the theme of “energy transitions” that fundamentally change the ways people relate to each other and the local landscape. For example, you might focus on the transition from an agrarian to industrial economy; the introduction of electricity to a region; the transition from muscle or water to fossil fuel powered forms of transportation. If you focus on regional shifts in consumption, you should pay attention to how these energy transitions require new relationships with *specific* energy resources which themselves come from specific places. For example, if you are focusing on the introduction of electricity to a region, you should attempt to answer how that electricity was generated (e.g. coal, nuclear, hydropower). It may be difficult to trace completely the linkages between consumption and production, but I want to see evidence of an effort in this regard. You may also look a place of energy production (e.g., mountaintop coal mining in Appalachia; Oil in Alaska), and attempt to explain how this production landscape developed in relation to wider *energy* *transitions* in the societal *consumption* of energy. You may either focus deeply on one energy transition, or provide a broader overview of a succession of energy transitions. In other words, your project might span a shorter 20-50-year period, or several centuries.

You can learn more about your chosen places through historical documents.

* Many cities and towns throughout the country have historical societies/museums associated with them (e.g., for Syracuse and Onondaga County see, <http://www.cnyhistory.org/>). If your place is nearby, you should absolutely visit these places to seek out documents. If you cannot visit your place, you can still call them and speak with archivists on site who might be able to scan or copy documents and send them to you.
* Look at a series of maps of your place over time. The cartographic collection in the Bird Library has many excellent maps of central New York. You’d be surprised at what you can learn about Syracuse just by looking at maps from different periods.
* *Talk* with people who have lived in your place for a long time.
* Check out material available on the Library of Congress’s American Memory website (http://memory.loc.gov/ammem/index.html). Click on “Cities and Towns” and search for the places you’re writing about. The American Memory website is a \*fabulous\* place for digital documents of photos, maps, illustrations and much, much more.
* These are just preliminary suggestions. I strongly encourage you to talk with librarians at Bird Library, not just the reference deck, but in special collections and in the map section of the library.

*Project Proposal*

You must submit a 1 page project proposal on. In this proposal, you must: (a) describe your chosen topic and explain why the topic interests you (b) A list of at least five NON-INTERNET references – books or journal/magazine/newspaper articles (any newspaper or magazine that also publishes their articles online can be used)

*References and Bibliography*

You will need to use the library to do this well. As noted above, there is some material online, but most relevant information that you will find of use will not be there. Want a good grade on this paper? *Use the library and find relevant, written sources.* You must have at least ten **reputable** references – historical documents, books or journal/magazine/newspaper articles (any newspaper or magazine that also publishes their articles online or is available through SU Library’s many useful electronic databases **can** be used). You may not use Wikipedia as a source but you are free to consult it for references and bibliographies. If you want to use any source within or beyond your ten that you are not sure is “reputable” (and usually will be online), **you must approve the sources with the instructor.**

*Citation/Bibliography* – **Any information or ideas you use from other works must be cited accordingly. When in doubt, cite!!!** You may use any citation system you like (footnotes or in-text parenthetical citation, e.g., (Huber 2009: 89)), as long as it is comprehensive and consistent. One blackboard, I will provide substantial documents on citation methods with examples of how bibliographies should look. You need to use these to get a good grade on this assignment.

**GRADING**

Participation 20% A (93-100) C (73-76)

Discussion Leadership 10% A- (90-92) C- (70-72)

Five Short Essays 50% B+ (87-89) D+ (67-69)

Found Object 5% B (83-86) D (63-66)

Final Project 15% B- (80-82) D- (60-62)

100% C+ (77-79) F (0-59)

**Classroom Policies**

It is of paramount importance that the classroom environment be conducive to discussions, questions, and debates. This can only be the case if there is an atmosphere of inclusion, fairness, and mutual respect both between and among the students.

1. No laptops, smart phones, and other internet-connected devices can be used during lecture or discussion section. I believe the ability to surf the internet and social media is too tempting and it can be distracting to other students. If you have a learning-based reason that you absolutely must use a laptop, please provide me the necessary rationale and documentation.
2. Please be on time and if you unavoidably have to be late enter and sit down quietly.
3. Please do not make personal comments about others even if you disagree strongly with a comment – address the content of their comment only.

**Student Athletes**

Many of you are student athletes. Athletics is an important part your time in college, and I will do my best to accommodate your travel schedules.  Typically, your coaches or another official associated with the team or athletic department will give you a letter explaining your status and a list of your away games. Once you receive this material, I want you to give me a copy.

**Academic Integrity**

The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort.

For more information and the complete policy, see <http://academicintegrity.syr.edu>

**Students with Disabilities**

If you believe that you need accommodations for a disability, please contact the Office of Disability Services(ODS), http://disabilityservices.syr.edu, located in Room 309 of 804 University Avenue, or call (315) 443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue students with documented disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible. You are also welcome to contact me privately to discuss your academic needs although I cannot arrange for disability-related accommodations.

**Religious Holidays**

SU’s religious observances policy, found at <http://supolicies.syr.edu/emp_ben/religious_observance.htm>, recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holy days according to their tradition.  Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice/Student Services/Enrollment/My Religious Observances from the first day of class until the end of the second week of class.

**Statement on add/drop policy**

It is the policy of the Geography Department that students must obtain FIRST the signature of the instructor and THEN the signature of the department chair if they wish to drop or withdraw from this course.

**SCHEDULE FOR READING AND ASSIGNMETNS**

(*readings are due the day listed – all readings not from textbooks are posted to blackboard)*

Monday August 29th

*Introduction to the course*

**PART I – ENERGY HISTORY – THE LONG VIEW**

Wednesday August 31st – From Hunter-Gatherers to Agriculture

Crosby, *Children of the Sun*, Preface, Chapters 1-3, pp. 1-58

Wednesday September 7th – The Fossil Fuel Age – From Coal-Steam to Oil-Electricity

Crosby, *Children of the Sun*¸ Chapters 4-9, pp. 63-166

**PART II – COAL, STEAM AND CLASS STRUGGLE**

Monday September 12th – Fossil Capital (Lecture)

Malm, *Fossil Capital*, Chapters 1-4, pp. 1-76

Wednesday September 14th – Fossil Capital (Discussion Leadership – Group 1)

**ESSAY #1 DUE**

Malm, *Fossil Capital*, Chapters 5-7, pp. 77-164

Monday September 19th – Fossil Capital (Discussion Leadership – Group 1)

Malm, *Fossil Capital*, Chapters 8-12, pp. 165-278

Wednesday September 21st – Fossil Capital (Open Discussion)

Malm, *Fossil Capital*, Chapters 13-16, pp. 279-394

**PART III – COAL AND GEOPOLITICS**

Monday September 26th – Coal and Empire (Lecture)

**ESSAY #2 DUE**

Shulman, *Coal and Empire*, Introduction, Chapters 1-2, pp. 1-66

Wednesday September 28th – Coal and Empire (Discussion Leadership – Group 2)

Shulman, *Coal and Empire*, Chapters 3-4, pp. 69-124

Monday October 3rd – Coal and Empire (Discussion Leadership – Group 2)

Shuman, *Coal and Empire*, Chapter 5, 125-163

Wednesday October 5th – Coal and Empire (Open Discussion)

Shulman, *Coal and Empire*, Chapter 6, Conclusion, 164-228

**PART IV – ELECTRIC UTOPIAS: 1930s**

Monday October 10th- Power (Lecture)

**ESSAY #3 DUE**

Chase, S. *The Promise of Power*, pp. 1-32

New Deal Network, “Electricity in the Limelight: The Federal Theatre Project Takes on the Power Industry” (http://newdeal.feri.org/power/essay01.htm)

October 12thh – The Technocracy Movement (Open Discussion)

Akin, W. *Technocracy and the American Dream*, ix-xiii, 64-80, 131-170

**PART V – ELECTRIC INEQUALITIES**

Monday October 17th – Power Lines (Lecture)

**ESSAY #4 DUE**

Needham, *Power Lines*, Intro, Chapters 1-2, pp. 1-54

Wednesday October 19th – Power Lines (Discussion Leadership – Group 3)

Needham, *Power Lines*, Chapters 3-4, pp. 55-122

Monday October 24th – Power Lines (Discussion Leadership – Group 3)

Needham, *Power Lines*, Chapters 5-6, pp. 123-184

Wednesday October 26th – Power Lines (Open Discussion)

Needham, *Power Lines*, Chapter 7, Conclusion, pp. 185-258

**PART VI – ELECTRIC REALITIES IN THE PRESENT**

Monday October 31st – The Grid (Lecture)

**ESSAY #5 DUE**

Bakke, *The Grid*, Introduction, Chapters 1-2, xi-xxx, 1-56

Wednesday November 2nd – The Grid (Discussion Leadership Group 4)

Bakke, *The Grid*, Chapters 3-4, 57-114

Monday November 7th – The Grid (Discussion Leadership Group 4)

Bakke, *The Grid*, Chapters 5-7, 115-219

Wednesday November 9th – The Grid (Open Discussion)

Bakke, *The Grid*, Chapters 8-9, Conclusion, 219-292

**PART VII – FOOD – THE OTHER ENERGY RESOURCE**

Monday – November 14th – Stuffed and Starved (Discussion Leadership Group 5)

**ESSAY #6 DUE**

Patel, *Stuffed and Starved*, Preface, Introduction, Chapter 2, pp. 1-54

Wednesday – November 16th – Stuffed and Starved (Discussion Leadership Group 5)

Patel, *Stuffed and Starved*, Chapters 6, 8, Conclusion, pp. 129-172; 221-258; 299-324

**PART VIII – SOLAR UTOPIA?**

Monday November 28th –Paths to Paradise (Lecture)

**ESSAY #7 DUE**

Gorz, *Paths to Paradise*, pp. vi-vii, 1-40

Wednesday November 30th – Solar Utopia (Open Discussion)

Gorz, *Paths to Paradise*, pp. 40-77

Shwartzman, D. 2013 “The Great Bifurcation and Prospects for Solar Communism in the Twenty-First Century” pp. 480-495.

Monday and Wednesday December 5 and 7th - Presentations

**ESSAY #8 DUE ON 12/5**

**FINAL PROJECT DUE FRIDAY DECEMBER 9TH**