ENERGY & INTERNATIONAL SECURITY

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Fall 2019
Weds. 3:00-5:45pm

DESCRIPTION & OBJECTIVES

This course examines issues at the intersection of national energy security/sustainability and international conflict/cooperation. Is oil import dependence a foreign policy liability or cause for war? Do globalization and the interdependence of energy markets favor international cooperation and peace? More specifically, can Saudi Arabia and Russia use hydrocarbon exports as energy weapons? Or, will low oil prices, as well as the promise of natural gas exports, lock in a strategic pivot away from the Persian Gulf and reinvigorate U.S. global leverage, if not “dominance,” especially amid growing local demand across the Middle East and East Asia? Will this give grist to future U.S. energy sanctions on Russia, Iran, Venezuela and other strategic rivals, or stoke instability across the Middle East and Eurasia? Are the U.S. and China doomed to compete for access to global energy supply? Will there be a nuclear energy renaissance, and if so, will it increase the likelihood of weapons proliferation and/or regional conflict? Similarly, do innovations that ease distribution of renewable energy, promote local sustainability, and fuse energy with information systems reduce risks of resource wars or lower barriers to cross-border conflict?

Students are introduced to major theoretical and policy analytical lenses used to examine critical geopolitical and geoeconomic issues associated with national pursuits of energy security and sustainability. The above questions and others will be probed by dissecting the complex interaction between resource endowments, technologies/innovation, economics, politics, power, and strategy in the oil, natural gas, nuclear, and alternative energy sectors; and by analyzing the implications for broader themes and concepts of security and statecraft in international relations. Accordingly, the course is structured around historical and comparative analysis of core issues in each sector that cut across different states and regions related to resource scarcity, market dynamics, trade vulnerability, corporate behavior, policymaking, national welfare and threat perceptions, and strategic interaction.

Learning Outcomes

Students will demonstrate proficiency at critiquing alternative explanations for international energy competition/conflict/war and assessing systematically the respective policies, institutions, and technologies adopted to bolster energy security and sustainability by different actors across the international system. In studying energy systems across different sectors, they also will acquire knowledge about the relationship between science,
technology, and international affairs, more broadly. In addition, students will enhance their professional development by learning to communicate effectively in applying critical analysis for generating concrete policy recommendations on international security issues at the nexus of energy resources, technologies/infrastructure, trading, governance, and sustainable social systems at the local, national, and global levels.

**FORMAT & REQUIREMENTS**

The course consists of lectures and discussion, with in-class documentaries and prominent guest speakers/panel discussions occasionally interspersed. Students are expected to complete the required reading before each class and to contribute actively to all in-class discussions/activities. Most classes will begin with a lecture on the designated topic, and conclude with a structured discussion/activity of a major theoretical puzzle and attendant policy debate.

In addition to the in-class midterm exam (October 2\textsuperscript{nd}) and regular class participation, each student will be responsible for drafting one short (3-4 pages, double-spaced) critical review of official and/or expert commentary on the international security implications of the changing energy landscape or related climate developments. This can include presentations on campus (e.g. public talks, in-class guest lectures), government statements, expert blogs or other on-line commentary, articles in policy journals/outlets, etc. The review should consist at least of a brief summary of the main argument of the targeted commentary, and an analytical and empirical critique. Critical reviews can be turned in at the student’s discretion on or before November 20\textsuperscript{th}.

Moreover, each student will have the choice of writing a research paper (30 pages, double-spaced) OR participating in a dynamic policy simulation. The research paper will seek to explain the history and challenges related to a particular country’s energy diplomacy. Attention will be devoted to describing patterns or trends in respective energy specific diplomacy; analyzing underlying political, economic, technical, and/or cultural causes; and assessing associated strategic implications. Students are expected to conduct extra-curricular research on the topic. However, with approval, they can use this assignment to complement or extend research or analysis conducted for another course. A preliminary one-page outline will be due on October 23\textsuperscript{rd}; final papers will be due on December 3\textsuperscript{rd}.

Alternatively, each student can opt to participate in a dynamic course policy simulation that will take place during the weekend of November 23\textsuperscript{rd} – 24\textsuperscript{th}. To be clear, this is optional and in lieu of writing the research paper. The specific scenario and format of the simulation will be discussed in class. As part of the preparation, each student will be required to write two short background papers (3-4 pages, double-spaced) and contribute to drafting a group policy position paper (7 pages, double-spaced). For the first background paper (due October 23\textsuperscript{rd}), each student will summarize the policy issues at stake from the respective national perspective. The second background paper (due November 13\textsuperscript{th}) will focus on identifying the interests and strategic perspective associated with the institutional or corporate actor represented by the student. The third paper will be collectively written by respective national/transnational/corporate teams, laying out the initial policy positions
and objectives for the designated scenario (due **November 23**nd). Each student will participate actively in all group problem-solving and deliberative exercises during the two-day policy simulation. Students must notify Professor Stulberg via email of their preference to participate in the optional policy simulation by **October 9**th.

Finally, students are required to write a policy memo (8-10 pages) on a topic at the intersection of energy and national security relevant to a theme covered during October 9, 16, November 6, 13, or 20. Examples can include:

1. How should the United States respond to continuing Russian pressure on Central and Eastern European countries?
2. How should the United States prepare for and respond to a potential blockage of sea lanes in the Straits of Malacca?
3. What should the United States do about the challenges affecting the nuclear power industry?
4. What are the greatest challenges at the intersection of emerging energy technologies and national security and how can the United States meet them?
5. Another related topic of choice with approval from instructors.

The memo will be addressed to the U.S. National Security Advisor and will: (1) succinctly frame the issue for consideration, putting it into a broader context and offering clarity about why it is important that it be addressed promptly; (2) set forth a range of policy options (optimally between three and five) for addressing the issue and discuss the pros and cons of each options; (3) make a recommendation for Presidential action among those options. The idea is not to do extensive additional research but to use the readings and class discussions as a foundation for this endeavor. A summary of the project must be submitted to Professors Stulberg and Sherwood-Randall no later than **6 pm on November 6**th. The final paper must be submitted by **December 11**th at **6 pm**. No late papers will be accepted.

**GRADING**

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<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Class Participation</td>
<td>10%</td>
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<tr>
<td>In-Class Midterm</td>
<td>20%</td>
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<tr>
<td>Research Paper or Simulation (Optional)</td>
<td>30%</td>
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<tr>
<td>Simulation Background Papers (5% each)</td>
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<tr>
<td>Group Position Paper</td>
<td>(10%)</td>
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<tr>
<td>Participation</td>
<td>(10%)</td>
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<tr>
<td>Critical Review</td>
<td>10%</td>
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<tr>
<td>Individual Policy Position Paper</td>
<td>30%</td>
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READING
(Available for Purchase at GT Barnes & Noble Bookstore)


*Agnia Grigas, The New Geopolitics of Natural Gas* (Cambridge, MA: Harvard University, 2017);

Additional Background Reading:

*Recommended

USEFUL LINKS

Baker Institute, Energy Forum Research, [http://www.rice.edu/energy/research/](http://www.rice.edu/energy/research/)
[https://www.cfr.org/geopolitics-energy](https://www.cfr.org/geopolitics-energy)
Harvard University, Belfer Center, Energy Technology Innovation Policy [http://belfercenter.ksg.harvard.edu/project/10/energy_technology_innovation_policy.html](http://belfercenter.ksg.harvard.edu/project/10/energy_technology_innovation_policy.html)
Harvard University, Belfer Center, The Geopolitics of Energy Project
http://belfercenter.ksg.harvard.edu/project/68/geopolitics_of_energy_project.html
Center for New American Security (Energy, Economics, & Security),
https://www.cnas.org/research/energy-economics-and-security
Center for Strategic and International Studies (Energy & Geopolitics),
https://www.csis.org/topics/energy-sustainability/energy-geopolitics
Oil Drum Blog: http://www.theoildrum.com/
Columbia University/SIPA Center on Global Energy Policy,
http://energypolicy.columbia.edu/
Stanford University, Precourt Center for Energy Research, http://pie.stanford.edu/
White House Blog: Energy and the Environment:
http://www.whitehouse.gov/blog/issues/Energy-%2526-Environment
World Bank Energy:
LexisNexis accesses hundreds of energy sources: Platts, Oil and Gas Journal, Petroleum Economist, among many others.

**DECORUM & INTEGRITY**

Learning together requires that everyone must feel welcome and able to trust others in the class. A central aim of the course is to encourage students to think and be critical. Accordingly, all students are expected to exchange freely ideas while respecting the opinions of each other. Similarly, each student must recognize that academic dishonesty (such as cheating on a test/quiz or plagiarism on a paper) completely undermines the mission of this course, is surprisingly easy to detect, and is taken very seriously by the Institute. Do not be tempted to take a short cut to complete an assignment—consult the GT honor code/Honor Advisory Council http://www.policylibrary.gatech.edu/student-affairs/academic-honor-code -- if there are any questions.

All lectures and discussions are not to be taped or recorded, unless approved by the professors. Students must turn off cell phones, pagers, and other electronic devices that could be distracting during class. Exceptions for emergency situations can be made upon prior consultation with the professors.
COURSE SCHEDULE

PART I: HISTORY & FUNDAMENTALS


Aug 28: Energy Basics (Oil, Natural Gas, and the Nuclear Fuel Cycle)

Reading:
Hogselius, Chps. 1-2;
Ferguson, Chps, 1-5, 7, 8;

Recommended Reading:
*Kalicki & Goldwyn, Chp. 1.
*“The Energy Story,” Chps. 1, 2, 8, 9 (peruse) http://www.energyquest.ca.gov/story/chapter08.html

Sept. 4: Hydrocarbon Century & Geopolitics: From “King Coal” to the Rise of “Big Oil” & OPEC
(In-class Film & Discussion: The Prize, Part 6)

Reading:
Price-Smith, Chps. 1 & 4;
Kalicki & Goldwyn, Chp. 3 (on-line, CANVAS)
O’Sullivan, Chp. 1

Recommended Reading:
*Parra, Chp. 3-4, 12-14.
*Watch “The Prize” Parts 2, 5 & 7.
Sept. 11: Energy & National Security Policymaking

Reading:
Barack Obama, “Presidential Policy Directive 1,”
The White House February 13, 2009
https://fas.org/irp/offdocs/ppd/ppd-1.pdf

Sept. 18: Different Faces of Energy Security

Reading:
Hogselius, Chp. 4
Klare, Chp. 1 (CANVAS).
“President Donald J. Trump is Unleashing American Energy Dominance,”
O’Sullivan, Chp. 2

Recommended Reading:

Sept. 25: Resource Nationalism & Beyond

Reading:
Hogselius, Chp. 3
Price-Smith, Chp. 2;
EIA, “What Drives Crude Oil Prices: Overview,” (From spot prices-Demand OECD), https://www.eia.gov/finance/markets/crudeoil/
Yetiv, Chp. 2 (CANVAS).
Robert McNally, “Crude Volatility,” Chps. 9-10 (CANVAS)

Recommended Reading:
*Yetiv, Chps. 3 & 4;
*Parra, Chp. 17

Oct. 2: In-class Mid-term & Changing Global Landscape

Reading:
IEA, “World Energy Outlook, 2018,” Executive Summary
ExxonMobil, “2018 Outlook for Energy: A View to 2040,”

Recommended Reading:
*BP Energy Outlook, 2019 (peruse),
*National Intelligence Council, Global Trends 2030: Paradoxes of Progress” (January 2017),
PART II: ENERGY SECURITY & REGIONAL CONFLICT/COOPERATION

Oct. 9: Eurasian & Asian Energy Pivots

Reading:
O’Sullivan, Chps. 8-10.
Grigas, Chps. 3, 4, 6, 7 (peruse)

Recommended Reading:

Reading:
O’Sullivan, Chps. 4 & 11
Glaser & Kelanic, Chp. 1 (CANVAS).
Elizabeth Sherwood-Randall, *Allies in Crisis: Meeting Global Challenges to Western Security* (New Haven, Yale University Press, 1990), pp. 136-183 (CANVAS);

Recommended Reading:
*Kalicki & Goldwyn (Chp. 10 & peruse rest of Part III)
*Glaser & Kelanic, Chp. 8.
*Yetiv, Chps. 5-7.

PART III: ENERGY & STRATEGIC INTERACTION


Reading:
O’Sullivan, Chps. 5-6
Hogselius, Chps. 5-7
Price-Smith, Chp. 4;


Michael Ross, “Blood Barrels”, *Foreign Affairs*, May/June 2008 (Library: e-journals);

*Recommended Reading:*
*Glaser & Kelanic, Chps. 3 & 5;*
*Ferguson, Chp. 6*

**Oct. 30**  
**No Class/ Team Meetings/TBA**

**Nov. 6**  
**Changing Nuclear Landscape: Implications for Energy & International Security**

*Reading:*
Ferguson, Chps. 3-5;


*Recommended Reading:*


* “Final Report,” Investigation Committee on the Accident at the Fukushima Nuclear Power Station, Executive Summary (CANVAS), peruse.

**Nov. 13: Geopolitics & the Age of Natural Gas (2nd Sim Paper Due)**

*Reading:*

O’Sullivan, Chps. 3, Section 2; Conclusion
Grigas, Chps. 1 & peruse 2.


Recommended Reading:
*Kalicki & Goldwyn, Chp. 8.

Nov. 20:  Contemporary Energy Technology & Energy Security Challenges

Reading:
Department of Energy, Quadrennial Technology Review: An Assessment of Energy Technologies and Research Opportunities (January 2015), (CANVAS)
Department of Energy, Quadrennial Energy Review: Transforming The Nation’s Electricity System: The Second Installment of The QER, (January 2017), (CANVAS)
Jonathan Elkind, Toward A Real Green Belt and Road, Columbia China Energy and Research Program, April 2019 (CANVAS).

Recommended Reading:
*Varun Sivaram, Taming the Sun: Innovations to Harness Solar Energy and Save the Planet. MIT University Press, 2018. (CANVAS),
Nov. 23-24:  *SIMULATION (TBA)
             (Group Decision Paper Due, 11/23)
Dec.  3:      RESEARCH PAPER DUE 6:00PM
Dec. 11:      FINAL POLICY MEMOS DUE 6:00PM