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 occasionally interspersed. Students are expected to complete the required reading before each class and to contribute actively to all discussions.

Each student will have to write a *one page* (single-spaced) brief on a selection of the week’s reading *four times* throughout the semester (or on a reading or argument advanced by a guest speaker of her/his choosing). Each brief must summarize a relevant debate, specify an analytical critique, and identify the practical significance of the analytical critique. Each brief is due the date that the specific reading will be assigned for the class.

In addition, graduate students will be expected to develop, draft, and guide a policy simulation. Although participation in the actual course simulation that will take place during the weekend of **November 23rd-24th**, it is **optional**, each graduate student is required to write several short preliminary concept papers and a group scenario. Upon collectively identifying a topic, each student will write two concept papers (3-5 pages each, double spaced). The **first** will specify and explain prevailing conditions that constrain options and behavior among contending actors, as well as assess alternative driving forces that motivate the behavior of contending actors. The **second** paper will identify critical uncertainties that can alter constraints, motivations, and/or behavior. All graduate students will then collectively draft a **specific scenario** around the issue for distribution to the class on **November 20th**. Those graduate students who opt to participate in the simulation, will be required to play the role of control by guiding events and responding to student inquiries. Students who do not participate in the simulation will be required to script a set of events that would inform actor behavior (as derived from their preliminary analyses) throughout the exercise. This is to be handed in by **November 23rd**, prior to the onset of the simulation. The process of scenario writing will be discussed in class and informed by reading Peter Schwartz’, *Art of the Longview*.

Each student also will be responsible for drafting a critical review (5-7 pages double-spaced) of official and/or scholarly/expert commentary on the international security implications of the changing energy landscape or climate change. Specific details will be discussed in class. This can be handed in any class on or before **November 20th**.

Finally, each student will write a policy memo (8-10 pages double-spaced) on a contemporary case study or topic of her/his choosing. Each memo will be addressed to a client—a head of a government agency or international institution, or a policy strategist at a firm or NGO—and will briefly summarize the geopolitical significance of the event or issue, critique alternative theoretical/conceptual explanations for the event/issue, outline
attendant policy options, and explain how to choose among them. The idea behind these memos is not to do extensive additional research but to analyze critically contending hypotheses and to tease out logistically consistent policy choices. The final paper will be due on **December 11th at 6:00pm**. No late papers will be accepted.

**GRADING**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tr>
<td>Class Participation</td>
<td>10%</td>
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<tr>
<td>Briefs (5% each)</td>
<td>20%</td>
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<tr>
<td>Simulation</td>
<td>30%</td>
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<tr>
<td>Background Papers (5% each)</td>
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<tr>
<td>Simulation (10%)</td>
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<td>Participation/Script (10%)</td>
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<tr>
<td>Critical Review</td>
<td>15%</td>
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<tr>
<td>Individual Policy Memo</td>
<td>25%</td>
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</tbody>
</table>

**READING**

(Available for Purchase at GT Barnes & Noble Bookstore)

Per Hогsелиус, *Energy and Geopolitics* (New York: Routledge, 2019);
Andrew T. Price-Smith, *Oil, Liberalism, and War* (Cambridge: The M.I.T. Press, 2015);
Charles Ferguson, *Nuclear Energy: What Everyone Needs to Know* (New York: Oxford University Press, 2011); and
Agnia Grigas, *The New Geopolitics of Natural Gas* (Cambridge, MA: Harvard University, 2017);

Additional Background Reading:

**USEFUL LINKS**

Baker Institute, Energy Forum Research, [http://www.rice.edu/energy/research/](http://www.rice.edu/energy/research/)
Atlantic Council (Eurasian Energy Futures Initiative),
Harvard University, Belfer Center, Energy Technology Innovation Policy 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 Strategic and International Studies (Energy & Geopolitics), https://www.csis.org/topics/energy-sustainability/energy-geopolitics
Nuclear Threat Initiative, https://www.nti.org/
Stanford University, Precourt Center for Energy Research, http://pie.stanford.edu/
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. 21:** Introduction: Energy Systems, National Security & Geopolitics

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

*Reading:*
Hogselius, Chps. 1-2;
Ferguson, Chps, 1-5, 7, 8;
Kalicki & Goldwyn, Chp. 1.
“The Energy Story,” Chps. 1, 2, 8, 9 (peruse) [http://www.energyquest.ca.gov/story/chapter08.html](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
Parra, Chp. 3-4, 12-14.
Watch “The Prize” Parts 2, 5 & 7.
Sept. 11: **Energy & National Security Policymaking (LSR)**

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

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/](https://www.eia.gov/finance/markets/crudeoil/)
Yetiv, Chp. 2 (CANVAS).
Robert McNally, “Crude Volatility,” Chps. 9-10 (oil boom-bust cycle today)?
Yetiv, Chps. 3 & 4;
Parra, Chap. 17

Oct. 2: Changing Global Landscape

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


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);


Mr. Y, “A National Strategic Narrative,” Woodrow Wilson International Center for Scholars
PART III: ENERGY & STRATEGIC INTERACTION


Reading:
O’Sullivan, Chps. 5-6
Hogselius, Chps. 5-7
David Victor and Rebuttals, “What Resource Wars?”, The National Interest, Nov/Dec 2007 and Jan/Feb, 2008 (CANVAS);
Price-Smith, Chp. 4;
http://www.foreignpolicy.com/articles/2009/08/12/the_strait_dope
Bud Coote, Impact of Sanctions on Russia’s Energy Sector,” Atlantic Council/Global Energy Center (March 2018),
Michael Ross, “Blood Barrels”, Foreign Affairs, May/June 2008 (Library: e-journals);
Glaser & Kelanic, Chps. 3 & 5;
ICSR Report, “Caliphate in Decline: An Estimate of Islamic State’s Financial Fortunes,” ICSR Kings College (2017),
Ferguson, Chp. 6

Oct. 30  No Class/ Control or Team Meetings/TBA

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

Reading:
Ferguson, Chps. 3-5;
Pierre Goldschmidt, “Multilateral Nuclear Fuel Supply Guarantees & Spent Fuel Management: What are the Priorities?” Daedalus (Winter 2010), pp. 7-19. (CANVAS);
“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

Reading:
O’Sullivan, Chps. 3, Section 2; Conclusion
Grigas, Chps. 1 & peruse 2.
Adam N. Stulberg, “Eurasia’s Pipeline Tangle,” Russia in Global Affairs
(24 September 2011)
http://eng.globalaffairs.ru/person/p_2445
EIA, “Oil Transit chokepoints”
http://www.eia.gov/countries/regions-topics.cfm?fips=WOTC
Jonathan Elkind and Tim Boersma, Talking Past Each Other: Transatlantic
Perspectives on European Gas Security, Columbia SIPA: Center
on Global Energy Policy, May 2018 (CANVAS)
Kalicki & Goldwyn, Chp. 8 (CANVAS).
Adam N. Stulberg, “Natural Gas and the Russia-Ukraine Crisis: Strategic
Restraint and the Emerging Europe-Eurasia Gas Network,” Energy
Research & Social Science 24 (February 2017), pp. 71-85.
(CANVAS).

Nov. 20: Contemporary Energy Technology & Energy Security Challenges
(Scenario Due)

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)
International Renewable Energy Agency/Global Commission on the
Geopolitics of Energy Transformation, A New World: The
Geopolitics of the Energy Transformation (2019),
http://geopoliticsofrenewables.org/assets/geopolitics/Reports/wp-
content/uploads/2019/01/Global_commission_renewable_energy_
2019.pdf
and Peril of High Technology Innovation,” Foreign Affairs,
July/August 2017 (library: e-journals)
Center for Naval Analyses, “Advanced Energy and National Security,”
2017 https://www.cna.org/CNA_files/PDF/IRM-2017-U-
015512.pdf
Jonathan Elkind, Toward A Real Green Belt and Road, Columbia China
Energy and Research Program, April 2019 (CANVAS).
Wolfram Lacher and Dennis Kumetat, “The Security of Energy
Infrastructure and Supply in North Africa: Hydrocarbons and
Renewable Energies in Comparative Perspective,” Energy Policy 39


Varun Sivaram, Taming the Sun: Innovations to Harness Solar Energy and Save the Planet. MIT University Press, 2018. (CANVAS)

Nov. 23-24: SIMULATION (TBA)

Dec. 11: FINAL POLICY MEMOS DUE 6:00PM