昆山杜克大学
DUKE KUNSHAN UNIVERSITY

PUBLIC POLICY 583SK

Energy and National Security

Spring 2017, Session 1

Class Times: TBD
Location: TBD
Academic Credit: 1 course
Course format: Seminar
Attributes (from Duke Catalog):
(CCI) Cross Cultural Inquiry
(EI) Ethical Inquiry
(W) Writing
Cross-listed in another department
(SS) Social Sciences

Instructor's Information

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Course Description

Energy and National Security examines the links between available, reliable, affordable, and sustainable energy supplies and the economic and national security of an advanced economy in the early 21st Century. The two countries of particular interest are China and the United States. Both are net energy importers, both depend on smoothly functioning global energy markets and open sea-lanes, and both face ethical and environmental issues as they choose among their energy sources and suppliers. Both also are highly dependent on energy to power their economies, fuel their militaries, and prevent their enemies or competitors from inflicting damage on their economies or populations.

This course will use current think-tank and journalistic materials, case studies that lay out frameworks for understanding energy security and related background, guest experts from governments and energy companies, and a possible field trip to the U.S. Consulate General in Shanghai to round out the student learning experience. A background in energy issues is helpful, but not required.

Course Goals / Objectives

As a retired U.S. diplomat, I plan to walk you through the thought process of policymaking as we examine energy and its link to national security. I want you to approach these issues not as passive learners, but as officials charged with coming up with solutions, working with the often ambiguous and highly politicized information at hand. While we will use an overarching framework to provide criteria to evaluate energy sources and their potential costs and risks, my main goal is to help you refine the skills you will need to make policy decisions and sell them to decision makers. Our guest policymakers will help you see how this is done in practice.

Specifically, you should leave this course with:

-- In-depth knowledge about energy security options, and the ability to apply general principles to particular cases to evaluate the advantages and disadvantages of various energy sources for policymakers.

-- Expertise in producing a U.S. State Department-style memorandum, which requires a succinct statement of pertinent facts, a tight focus on the purpose of the memorandum, and an analysis of which facts are most important for the official reading the memo.

-- The ability to deliver a concise and focused oral briefing. As with memo writing, being able to deliver an effective policy briefing is a skill that will serve you well no matter what line of work you finally engage in. You will further refine your oral communication skills through in-class dissections of case studies, participation in three tabletop simulations, and your final briefing on a major energy security project.

Required Text(s)/Resources

We will use the learning management tool called "Sakai" for many of the readings and assignments of this course. I will post readings for each class period under the "Calendar" function of Sakai, where you can find information about what we will do each day. Your readings and other assignments will be found there as well.

Some of the course readings will come from the five books listed below, which you can buy (they are all mass circulation editions available in paperback) or borrow from the DKU library. Several are also available in electronic versions at no cost from the library.

Energy Security: Economics, Politics, Strategies and Implications, Pascual and Elkind, Editors. Brookings Institution. ISBN: 978-0-8157-6919-4 (electronic version at library)

Energy and Security: Strategies for a World in Transition, Kalicki and Goldwyn, Editors. Woodrow Wilson Center Press / Johns Hopkins University Press. ISBN: 978-1421411866

The Prize: The Epic Quest for Oil, Money & Power, Daniel Yergin. Free Press. ISBN: 978-1-4391-1012-6

Private Empire: ExxonMobil and American Power, Steve Coll, Penguin Books. ISBN: 978-0143123545

Oil, Vaclav Smil. Beginners Books. ISBN; 978-1-85168-571-4 (electronic version at library)

You will also need to download four case studies from the Harvard Business School website, using this link: (To be provided)

Recommended Text(s)/Resources

Since the course covers contemporary issues that are constantly changing, everyone should try to stay current. Reading The New York Times (www.nytimes.com) and The Wall Street Journal (www.wsj.com, electronic edition by subscription), as well as The Economist (www.economist.com), is highly recommended for general trends. The Oil and Gas Journal (http://www.ogj.com/index.html) is excellent for more in-depth coverage.

Course Requirements / Key Evidences

This class will make use of techniques often described under the rubric of the "flipped classroom." You will be responsible for learning many of the basic facts and concepts on your own time, making use of readings and other materials I will post on Sakai or that you will get from the course books. Our class time will be used to put these concepts to use, to quiz a recognized expert on new developments or thinking on a topic, to role-play energy security scenarios, to practice writing State Department memos, or to brief each other on key energy security topics. This means class time is not simply a duplication of the readings, but an arena where we will try out new ideas and see how well you understand them. It will also be a place where you will demonstrate you can think like a policymaker.

We will start with an introduction to the world of energy supplies and consumption, a review of technical energy terms, a discussion of how energy impacts national security, and the establishment of our framework for examining energy security in terms of reliability, affordability, availability and sustainability. The readings for these first three classes will provide you much of this information, which we will then apply in class to several representative cases.

Over the following six classes we will examine five major oil-exporting countries. The readings will provide you the necessary background for how those countries became major exporters, who the major policy players are, and what the trend is in their current production and exports. In class, we apply our four energy security criteria to the supplier and discuss how U.S., or later Chinese, energy security might be affected. Saudi Arabia, for example, has long been a major oil supplier to the U.S., and is increasingly so for China. But as the readings will show you (The Harvard Business School case study on Saudi Aramco and the chapter from Daniel Yergin's book *The Prize* in particular), that oil has to travel long distances through

several chokepoints to reach its destination. Saudi Arabia is also a leading member of the Organization of Petroleum Exporting Countries (OPEC), a cartel that has had a major impact on the price of oil, both up and (especially now) down. What are the political, environmental, and price risks inherent in getting oil from Saudi Arabia? As you will see below, you will then compose your own policy memo identifying the main issues for a decision maker, and assessing the most important risks of Saudi Arabia as an oil supplier to the U.S.

In the last half of the course, we will apply this same method to looking at how these same factors impact China's energy security.

Technology Considerations, if applicable

Students will need laptops to access assigned readings and videos on the class Sakai website, as well as to stay abreast of topical energy security issues, such as the current price of oil and natural gas, developing or continuing energy blockages, or other energy news. Laptops will also be needed for in-class writing assignments, and to receive feedback on written assignments. Students should have access to Microsoft Word and PowerPoint programs for their written assignments, and for the oral briefings they will deliver during the course of the semester. However, students will not be allowed use of laptops or other electronic devices in class, except at the direction of the instructor.

Assessment Information / Grading Procedures

You will have graded assignments and feedback throughout the semester, and I will post grades quickly in Gradebook in Sakai. The basic principle here is, no surprises. You will be able to tell at any given moment by looking in Gradebook how well you are doing. If you have a question about your grade or need extra help at any point, please let me know right away. I do not grade on a curve, and all of you can get an A. You are not competing against each other.

Grades will be based on the following components:

Class participation, 25 percent. As noted above, you will not sit passively through this class. You will role-play, debate, analyze case studies, question policy experts, challenge conventional wisdom, and make your own policy. You should come to class having read the assigned material, using a study guide I will give you with questions you should be able to answer. Our focus in class will not be on reviewing what you have read, but on analyzing how the information bears on energy security, and what would you highlight to a senior government official.

For our expert speakers, you will be expected to prepare questions and/or comments based on the case studies or other sources of information (you will do some of this in your Forum posts – see below). This, as well as participation in three in-class tabletop simulations, a team briefing on either Venezuela or Saudi Arabia, active in-class engagement with your fellow students' oral

briefings and final projects, and your interaction with experts we will meet on our field trip, will form the basis of the participation grade. The highest grades will go to those who contribute regularly and constructively, demonstrate a capacity to read carefully and think critically, and make connections to earlier lessons and to the overall themes of the course.

Forum, 10 percent. In Sakai you will find topics keyed to each week of the course under the Forum "Things to Think About." You should look at these topics before you do the readings. When you are ready, find the best 200 words to answer the question posed, react to other posts, or develop a new angle. Try when appropriate to cite specifics from the readings.

The main idea here is to reflect on some of the big policy choices in energy security and to prepare to engage with our several guest speakers. Your posts should demonstrate not just your command of the facts, but also your analysis of how those facts bear on U.S. energy security, and how they would lead you to probing questions for our experts.

Please make your post by 9 p.m. the night before the class for which it is assigned. I will comment on posts from time to time, and expect you to comment on your classmates' posts, so check back periodically. I will use a rubric to evaluate your posts that I will provide on our first day.

Oral briefing, 15 points. You will each do an individual, eight-minute, oral briefing, choosing from a list of topics you can find at the end of this syllabus. You should review these topics immediately, and provide me with your top five choices by our second class.

Delivering an effective oral briefing is an essential skill, but also a difficult one for many students, especially if you are briefing in a foreign language. "Effective" is a combination of entertaining, informative, credible and persuasive, all done in a time-constrained environment. The major weaknesses behind unsuccessful briefings stem from inadequate preparation. To be credible and persuasive, you have to know what you are talking about, rehearse several times so you hit your time mark and make fluid transitions, and have a clear and compelling thesis. This cannot be accomplished if you start work on your briefing the night before. I will do a "model" oral briefing in class to give you an example of what I am looking for, and also provide guidance on evaluating sources of information for your own briefings. As with many controversial topics these days, much of what you find in a casual Internet search on energy is biased, irrelevant or just wrong. We will discuss where to find primary source, high-quality energy facts. The U.S. Energy Information Administration and the International Energy Agency, for example, are both excellent sources. Fox News is perhaps less reliable.

Four days before you deliver your briefing you should send me by email your "thesis" on your topic, which is a capsule summary of the argument you plan to make, and the sources you have

consulted. Your thesis should be provocative and compelling, and debatable as well, not just a statement of fact. I will work with you to get this right. This will count for 5% of your grade.

As noted above, you will have eight minutes for your briefing. You can use PowerPoint or other visual aids, up to a limit of six items (slides, charts, maps, etc.). But you don't have to use any. The focus here is on the information you wish to impart and the argument you make, not the props you are using. You must state within the first minute what your thesis is, and then proceed to prove it. As with your forum posts, I will distribute a rubric the first day of class that I will use to evaluate your briefings. The actual briefing will count for 10% of your grade.

The only formal written product connected to these briefings is a list of sources you consulted, cited in bibliography format. The draft version of this, as noted above, is due four days before you brief. A final formal version is due when you make your presentation.

To repeat the key point from above, the most important element behind a successful briefing is preparation. Try to find time to run through your briefing out loud to your roommate or a friend. You can make an appointment to see me before your briefing and practice what you are planning to say. You should also send me any electronic visual aids you plan to use via email the night before you are scheduled to brief. I will load them on my computer so we don't waste time on technical issues in class.

Memo writing, 25 points. You will write four memos on energy security issues using a format used in the U.S. State Department. This format emphasizes brevity, focus, and journalistic writing, and is similar in style to policy memos in any foreign ministry where time is short and the number of issues to be dealt with large. Templates for these memos and examples will be posted in Sakai for the class periods where they are needed. I will also post explanatory videos on Sakai. Since this will be new to most of you, we will take this in small steps.

Final Project, 25 points. You will work in teams on a final project that evaluates key energy security suppliers to China. The point of this assignment is to put to use the skills you have refined in memo writing and oral briefings. The final products are a team-generated outline and bibliography due by TBD, and a final action memo you should send to me electronically by TBD. A signed hard copy is due in class TBD. The teams will brief the rest of the class on their projects in class on either our thirteenth or fourteenth class. Each team member must have a speaking role. The outline/bibliography is worth 5 percent points, the final memo 15 points, and the in-class briefing 5 points. The final total grade will apply equally to all team members.

Students should schedule at least one meeting with me as a team before the outline is due TBD. Time will be provided in class for the teams to meet and discuss how they will distribute the work, sources they will consult, what material they will include in their outlines, etc.

Although in the day-to-day workings of the State Department action memos must be kept short, in this case the final product can be 1,500-2000 words, and should thoroughly review the background of the issue, describe the current situation, and explicitly address each of the four dimensions of energy security. I will provide you more written guidance about these projects in class.

Diversity and Intercultural Learning (see Principles of DKU Liberal Arts Education)

Comparing and contrasting the energy security challenges of China, the United States, and other countries in the DKU setting should produce a rich variety of perspectives and produce novel insights and solutions. Each country faces a unique set of energy challenges, requiring tailor-made solutions, and inviting varied and original thinking. A diverse student body will make innovative outcomes more likely. Particular attention will be paid to the issue of English fluency in written and spoken student contributions. Students will be encouraged to consult the DKU Writing Studio and (for EFL students) their English instructors for help with English proficiency (see below).

Course Policies and Guidelines

ACADEMIC INTEGRITY

We are members of an academic community, and academic intellectual integrity is essential. Please familiarize yourself with Duke's web materials on plagiarism to ensure that you are aware of the academic conventions for crediting the sources you use. Plagiarism is defined here, and various possible misuses of source material are analyzed for their errors. The penalty for plagiarism is failure of the course and/or judicial sanctions. (See http://library.duke.edu/research/plagiarism).

ATTENDANCE

Attendance is mandatory. Students who must miss a class due to illness or another significant reason must notify the instructor in advance. Failure to do so will result in your final course grade being lowered a full letter grade for each class missed. (In other words, a grade of B- would become a C-.)

THE WRITING STUDIO: WORKING WITH A TUTOR

During the semester, you will be able to meet with a Writing Studio tutor based at DKU or with a Writing Studio tutor based at Duke University, NC, via Skype, Google Hangout, or Adobe Connect. The tutor will strategize with you about how to revise your work, taking up concerns about analysis, argument, and structural strategies. You will be able to schedule regular individual tutoring sessions. E-Tutoring sessions will also be available, where you can fill out a detailed submission form and submit a draft for feedback electronically.

Tentative Course Outline or Schedule

What follows is a tentative schedule of topics, subject to revision. Readings for each class will be noted in Sakai in Schedule under the date for each class.

Class 1 – Introduction, course mechanics, and the world energy scene.

Class 2 – U.S. energy overview, the relationship of energy to national security, and the first "Oil Shockwave" simulation.

Class 3 – The four dimensions of energy security, "oil for dummies," and a look at international oil companies.

Class 4 – Mexico as a U.S. energy supplier.

Class 5 – Canada as a U.S. energy supplier.

Class 6 – The North American energy scene, shale gas and tight oil, second Shockwave simulation.

(Tentative) Field trip to the U.S. Consulate General in Shanghai.

Class 7 – Venezuela as a U.S. energy supplier.

Class 8 – Saudi Arabia as a U.S. energy supplier.

Class 9 – Nigeria as a U.S. energy supplier.

Class 10 – China's energy scene and security.

Class 11 – Other large energy consumers: Japan, India and Europe. International energy organizations.

Class 12 – Other risks in energy security. Final Shockwave simulation.

Class 13 – Final projects memos due in class. First two teams brief their results.

Class 14 – Last two teams brief their final projects. Class wrap-up and conclusions.

Topics for Oral Briefings

The following topics all touch on an aspect of energy security, and are listed in the order they will be presented. Your job in each case is to describe the issue at hand, and provide a clear and provocative thesis on how it impacts energy security. You should state your thesis within the first minute of your briefing. You will have eight minutes total, and can use no more than six visual aids. If these are Powerpoint slides, be sure to send them to me electronically well before class. You will be graded based on a rubric that we will discuss in class.

Three days before you deliver your briefing you should send me by email your "thesis" on your topic. Your thesis should be a capsule summary of the argument you plan to make, and the sources you have consulted. The only written product is a list of those sources, in bibliography format, due when you give your briefing.

Please send me a rank order list of your top five choices by TBD.

Cantarell. This supermajor oil field was discovered in 1976 and has been the most productive field in Mexico. But its production has been declining dramatically. What has caused this decline, what could reverse it, and what is your thesis about how it affects the security of Mexico as an energy supplier to the U.S.?

Keystone XL Pipeline. In 2008 the TransCanada Corporation applied to the U.S. State Department for a Presidential Permit that would allow it to construct a 1,200-mile pipeline to move petroleum products from the Alberta oil sands to refineries on the Gulf Coast near Houston. More than six years later, the project has not yet begun, due to intense opposition in the United States. What is your thesis about why the pipeline has generated so much controversy?

2003 Power Blackout. On August 14, 2003, an electrical blackout began in Ohio and cascaded through eight U.S. states and the Canadian province of Ontario, leaving more than 50 million people in the dark. What caused it, what have we learned from it, and what does it say about electrical reliability and energy security in North America?

The Oil Curse. Also know as the "resource curse," this afflicts many of the large foreign energy suppliers to the U.S. and China. What is it, how does it impact U.S. energy supplies, and what is your thesis on how U.S. policymakers should handle it when making decisions about U.S. energy security?

Juan Pablo Pérez Alfonso. This Venezuelan had a major role in reshaping the relationship between energy producers and consumers. Who was he, what did he do in the energy domain, and how has that changed the dynamics of energy security?

Strait of Hormuz. This outlet from the Persian Gulf is regarded as a vulnerable choke point for Middle Eastern oil supplies. Iran has occasionally threatened to close the strait because of U.S. and EU sanctions related to its nuclear program. From an energy security perspective, what are the challenges posed by this situation? What is your thesis on how the U.S. – or China -- should manage these risks?

The Price of Oil. The world price of petroleum has dropped more than 50 percent over the last six months, with many experts blaming Saudi Arabia for causing the crash. What are the factors behind the sharp drop in oil prices, and what is your thesis about the Saudis' role in this dramatic change?

Falling Nigeria Oil Imports to the U.S. For decades Nigeria was the fourth or fifth largest source of oil imports into the United States. But in 2013, it failed to make the list of the top 10 largest foreign oil providers. Why? Nigeria continues to produce oil, which continues to be of a high quality (light/sweet). What is your thesis on why Nigeria imports have fallen so far?

Stealing Oil. Petroleum would seem like a commodity that is difficult to steal in any quantity. But in Nigeria, Syria and other countries, hundred of thousands of barrels disappear daily. Looking at Nigeria specifically, tell us how this oil is stolen, and what the consequences are for the country. What is your thesis on why the government isn't able to stop it?

CNOOC and Nexen. The Chinese National Offshore Oil Company (CNOOC) in 2013 bought a small but significant player in the Canadian oil sands, the third largest deposit of accessible oil in the world and the source of more than a quarter of U.S. oil imports. The sale of Nexen, Inc., to CNOOC for $15.1 billion was the largest Chinese overseas acquisition ever. What is your thesis on why CNOOC was willing to spend so much money to buy oil that it cannot for the time being ship back to China?

China and Shale Gas. By some estimates, China has shale gas deposits equal to or even larger than those of the United States. But development of shale gas in China has been very slow, despite the growing demand in China for clean-burning natural gas. Describe the efforts to date to develop shale gas in China. What is your thesis on why this has not developed more quickly?

Strategic Petroleum Reserve (SPR). The U.S. SPR was set up after the 1973 oil embargo. What is it, how often has it been used, and how does it impact energy markets and security? What is your thesis about the trigger point for drawing from the reserve, i.e. should it be used to slow rising prices, just for grave national shortages of oil, or for other purposes?

Japan and Nuclear Energy. After the Fukushima disaster of 2011, Japan moved away quickly from nuclear energy, which had provided 30 percent of the country's electricity and was expected to produce even more in the future. In recent months, the government has reversed course, and begun to reopen nuclear plants it had mothballed. Looking at this issue from a Japanese energy security perspective, what is your thesis on why the Japanese government has changed its policy?

Shell and Arctic Drilling. Royal Dutch Shell began drilling off-shore oil wells in the Arctic Ocean off the coast of Alaska in 2012. That drilling got off to a slow start, and ended 2012 with a near disaster – a drilling rig loaded with diesel fuel ran aground in high seas while being towed out of the Arctic Ocean. The Arctic is estimated to contain 20 percent of the world's recoverable oil and gas, but the financial and environmental costs of tapping it are daunting. Describe Shell's effort and challenges. What is your thesis on whether drilling for oil and gas in the Arctic makes sense for the United States from an energy security perspective?

Hurricanes and Critical Infrastructure. Hurricanes Katrina and Rita caused major damage to the U.S. energy industry in 2005. What happened, what effect did they have on energy security, and what lessons can be learned from them about protecting critical energy infrastructure?

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