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https://www.relooney.com/NS4960-Summer-2021.html

Dr. Robert Looney
Summer Term 2021
NS4960

OUTLINE

Texts

Meghan L. O'Sullivan, Windfall: How the New Energy Abundance Upends Global Politics and Strengthens American Power, Simon & Schuster 2017

Supplemental Texts (on Sakai under Resources-Supplemental Texts)

Maria Burns, Managing Energy Security: An All Hazards Approach to Critical Infrastructure, Routledge, 2019

Michael T. Klare, All Hell Breaking Loose: The Pentagon's Perspective on Climate Change, Metropolitan Books, 2019

David Bernell and Christopher Simon, The Energy Security Dilemma: US Policy and Practice, Routledge, 2017

John Duffield, Fuels Paradise: Seeking Energy Security in Europe, Japan and the United States, Johns Hopkins University Press 2015

Daniel Poneman, American Energy Policy: Building a Safe, Secure, and Prosperous Future, Harvard Belfer Center, April 2017

Robert Looney ed., Handbook of Oil Politics, Routledge, 2012

Robert Looney ed., Handbook of Transitions to Energy and Climate Security, Routledge, 2017

Amy Myrers Jaffe, et.al., Impact of Climate Risk on the Energy Security, and Technology Dimensions, Council on Foreign Relations, September 2019

The Economist, The New Power Superpowers, March 17, 2018

Class Objective: Develop a framework for understanding the critical aspects of energy security as it pertains to the United States and other parts of the world. In the course, we will introduce the range of issues and controversies surrounding energy security and the primary sources of energy data, analysis, and forecasts. While I focus the course on energy in the traditional sense, we want to expand the scope and look at the growing importance of strategic minerals such as rare earths and lithium in the provision of energy.

Course Organization

As a remote course, we will be in synchronous mode using Zoom.
Last summer we had plenty of time for class discussions, and questions that connected the course with current events and developments in the energy area so I would like to continue that practice.

This is an exciting time with the world energy markets, particularly oil in a state of flux, with many energy supply chains disrupted by the Covid-19 pandemic. Other items will come along, so there will be plenty to discuss.

Unfortunately, recent changes in the oil markets–the collapse in price in early 2020 make our primary text, Windfall, a little behind the times. While still very interesting, that book advanced the premise that with the recent shale oil boom in the US, a fundamental shift in global power to the US took place. The book then looks at how this shift was playing out not just in the US but around the world, giving the US certain advantages it did not have before the boom.

Of course, once the pandemic is over, we may come back to that setting, so it is worthwhile to go through the book. However, I will have to update-it with readings along the way. One area for class discussion should be how the collapse in oil prices has changed some of the main propositions the author advances.

I am an economist, so for the most part, we will look at energy security issues from that perspective. For those of you who have not had economics, I will review some of the basic concepts as we move along–most of these involve the functioning of markets, how prices adjust in markets, and how forecasts of energy supplies and the demand for energy will affect future prices.

This class can be relatively flexible, and I am always open to topics to include–just let me know if issues come up that you feel should be included.

In terms of the mechanics of the class, I have put the supplemental texts in our Sakai site under resources–supplemental texts. However, when you open Sakai and the resources tab, you will find several entries Week 1 Week 2, etc. These are for the asynchronous DL version we have for the distance energy certificate students—taught in the winter quarters.

For this course, I use my website, and the readings outside of the book assignments on the syllabus will be posted there. The link is https://www.relooney.com/NS4960-Summer-2021.html.

The only thing I use Sakai for in this class is the supplemental text tab under resources. The website is much more flexible than Sakai for adding new readings as we go along.

On the website, just scroll down the page to the current class date. There you will find links to that day's readings. I am updating the readings, so from time to time, you will find some of the older ones gone, and new ones added. I will always try to keep several weeks ahead if you want to read in advance. If some days you do not have time to do the readings before class, just click on "PowerPoint Class lectures" at the top of the page for a summary.

There are several options for a course grade (outlined on the last page below). For those of you selecting the short research and presentation option, energy security in a particular country is always a suitable research topic, especially ones that I will not cover in class. The countries I will cover in some detail besides the US are Japan, China ,UK, Iran, Iraq, Saudi Arabia, Nigeria, Russia, Mexico, and Canada. If you like to do your project on one of these, just let me know, and we can coordinate to make sure our presentations don't overlap.

As for office hours, I know all of you have different schedules and constraints. If you would like to talk, just send me an email at relooney@nps.edu, and we can set up a convenient time for a Zoom meeting.

Finally, some of you joined the class late. This means you will probably not be included in our Sakai site. If you find you cannot access the course in Sakai, just send me an email, and I will add you to the list.

ASSIGNMENTS

Week 1 – (July 7/12)

Introduction, Concepts of Energy Security/Energy Independence

- O'Sullivan, Introduction
- Jaffe, Introduction
- (Website readings)
- Duffield, Chapters 1, 2

Week 2 – (July 14/19)

Introduction to Energy Markets

- O'Sullivan, Chapters 1, and 2
- (Website readings)

Week 3 -- (July 21/26)

Energy Supply Factors

O'Sullivan, Chapter 3
Jaffe, Climate Change, Storm Surge and the Oil and Gas Industry
Burns, Chapter 4, Oil and Gas security -- lightly, for background (Sakai, supplemental texts)
If you are interested in some detail on other types of energy see Burns for Coal (chapter 5), nuclear (chapter 6), wind (chapter 7), and hydro and ocean (Chapter 8)
(Website readings)

Week 4 – (July 28/August 2)

US Energy Overview

O'Sullivan, Chapter 4 (down to A Historic Set of Reforms)
Jaffe, Water-Related Risks and Impacts on the US Energy System
Bernell and Simon, Chapters 2 and 3 (Sakai, supplemental texts)
(Website readings)

Week 5 – (August 4)

US Energy Policy

O'Sullivan, Chapter 7
Burns, Chapter 2
Jaffe, Climate Change Impacts on Critical US Energy Infrastructure
Bernell and Simon, Chs 4, 5 (Sakai, supplemental texts)
(Website readings)

Week 6 – (August 9/11)

US Energy Policy: International Dimensions

O'Sullivan, Chapters 5 and 6
Burns, Chapter 3
Bernell and Simon, Chapter 6 (Sakai, supplemental texts)
(Website readings)

Week 7 – (August 16/18/23)

Energy Security Asia/South Asia

O'Sullivan, Chapter 10
Economist New Power Superpowers – Section on China (Sakai Supplemental text)
Readings on Sakai (under additional readings)
(Website readings)

Week 8 – (August 25/30)
Energy Security Middle East/Africa
O'Sullivan, Chapter 11
Economist New Power Superpowers – Section on Petrostates (Sakai Supplemental text)
(Website readings)

Week 9 – (September 1/7)
Energy Security Europe/Russia/Central/Asia
O'Sullivan, Chapters 8, 9
Economist New Power Superpowers – Section on Europe (Sakai Supplemental text)
(Website readings)

Week 10 – (September 8/13)
North America/Caribbean/South America
O'Sullivan, last part of Chapter 4 (Starting with A Historic Set of Reforms)
Jeffe, A Clear and Present Danger: Climate Risks, the Energy System and US National Security
(Website readings)

Week 11 (September 15)
Summing Up
O'Sullivan, Conclusion
Economist New Power Superpowers – Section on Prospects (Sakai Supplemental text)
(Website readings)

Class Grade
There are several options for a course grade: For all options, class participation is 10%.

1. Class Brief (20%) and Final Examination (70%). The final will be take-home with a few days to complete. International students can take up to a week. The class brief will be a 10-minute brief on a topic of your interest – problems in the US coal industry, recent developments in nuclear power, the UK's nuclear plans – things of that sort.

2. Research brief (50%) and class presentation (40%). The research paper would be 10-12 pages with a 15-minute brief to the class. This option is for students who want to delve into a topic in more detail than we could in class.