

RENEWABLE ENERGY & OTHER ALTERNATIVE FUELS – LAW, POLICY & PROMISE

Law 270.7

**Tuesday & Thursday
11:20am to 12:35 pm
Room 134 Boalt Hall**

Lecturer: Steven Weissman

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Course Description: This course explores the growing and dynamic field of renewable and alternative energy supplies. It reviews local, state, and federal laws and policies that promote (and impede) such sources, and considers emerging distributed generation models. Turning to technology-specific evaluations, it surveys the range of emerging technologies and looks in depth into some specific models of high potential or value, concluding with consideration of proposed strategies for reducing greenhouse gases.

Requirements: Students are expected to attend class, complete the required readings each day, and contribute to the classroom discussion.

In addition, each student will prepare and make a brief class presentation on.

There will be a take-home final exam or paper option.

GRADING

Final grades will be determined by the following formula:

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|----------------------------------|-----|
| 1. Class participation | 20% |
| 2. In-class presentation | 15% |
| 3. Take-home final exam or paper | 65% |

Syllabus

Class 1: January 7

Introduction

1. Introduction to Renewable Energy Options and Potential, and Electric Systems

- *Who's Winning the Clean Energy Race? 2010*, The Pew Charitable Trust
Read pp.2-13 (top).
<http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Report/G-20Report-LOWRes-FINAL.pdf> 11
- *Prospects for Distributed Electric Generation* (2003) Congressional Budget Office,
<http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/45xx/doc4552/09-16-electricity.pdf> Read only the information in the box starting on the second page of the Introduction. We will get back to distributed generation later. 1
- Renewable Energy Potential maps from the U.S. Department of Energy and the National Renewable Energy Laboratory:
 - National Resources and Map
http://nationalatlas.gov/articles/people/a_energy.html#one (Read this page to gain an initial understanding of the most prominent renewable energy options in the United States.)
 - NREL Technical Resource Maps http://lgdata.s3-website-us-east-1.amazonaws.com/docs/145/791684/resource_maps_201207.pdf
(Look at each of these maps to be able to answer the following questions:
1. Are all states and regions created equal in terms of opportunities to rely on renewable energy? 2. Which renewable options predominate in which parts of the country?) 7
- Nine Things to Know About America's Power Grid (U.S. Department of Energy) <http://energy.gov/articles/top-9-things-you-didnt-know-about-americas-power-grid> 3
- *Renewable Energy Sparks a Probe of a Modern-day Land Rush*, by Louis Shagun, Los Angeles Times, June 1 2009
<http://www.latimes.com/news/local/la-me-solar1-2009jun01,0,6845540.story>
(How do we find the appropriate balance between the need to develop renewable energy projects, and the desire to protect sensitive public lands?) 3
- *Energy Regulatory Chief Says New Coal, Nuclear Plants May Be Unnecessary*, by Noelle Straub and Peter Behr, NYT April 22, 2009
<http://www.nytimes.com/gwire/2009/04/22/22greenwire-no-need-to-build->

[new-us-coal-or-nuclear-plants-10630.html?pagewanted=1](http://www.federalenergyregulatory.com/new-us-coal-or-nuclear-plants-10630.html?pagewanted=1) (Commissioner Wellinghoff is the Chair of the Federal Energy Regulatory Commission, which regulates wholesale power sales and much of the nation's transmission grid. What are the points of contention related to the Chair's perspective?) 3

Class 2: January 9

The Future of Renewable Energy

- *Western Grid 2050: Contrasting Futures, Contrasting Fortunes*. Clean Energy Vision Group of the Western Grid Project 2012. Read the Executive Summary. <http://www.cleanenergyvision.org/clean-energy-vision-technical-report/western-2050-executive-summary/> (This is just one of various visions for our energy future. What lies ahead under a Business-as-Usual scenario? What would we have to do to break our reliance on coal-fired power? How feasible is the vision offered in this report?) 5
- *Renewable Energy Futures Report*, National Renewable Energy Lab, June 2012 <http://www.nrel.gov/docs/fy12osti/52409-1.pdf> (Language about the role of each of the regions.) abridged version available on bCourses
- *White House Clean Energy Fact Sheet* January 2011 on bCourses