FINA 7397 Electric Power Markets
University of Houston
Summer 2, 2015

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The course provides an understanding of the U.S. Power Markets. It offers students the opportunity to examine the history of the power markets and the fundamental concepts of power. Students will obtain detailed knowledge of the US Power Grid including regional analysis, generation, load, and transmission. Students will also study the significance of the power markets in the economy and investigate the environmental impacts and weather impacts on the market. Once the background has been laid we will analyze the trading of power and discuss the corporate trading risks.

Instructor

The instructor is Meredith Lilly. Lilly has spent almost 15 years in energy trading. Her experience ranges from accounting, credit and financial risk analysis and consulting to marketing gas and power. As a marketer Lilly maximizes profitability by monetizing trading assets and equity positions. She markets physical power, RECs, and capacity in all U.S. Power Markets.

Grading Policy

Group Presentation/Report	30% (15% each)
Exams	60% (30% each)
Participation	10%
90% & up	A
80% & up	B
70% & up	C
60% & up	D
below 59.5%	F

*rounding will be .5%

Classes

Class participation is mandatory. I expect students to come to class prepared having read the assigned readings prior to class.

Make-up Work

If you think you will miss class or miss a homework deadline, discuss with me PRIOR to the missed deadline.

Equipment

You will need a basic calculator in the exams. I assume you have access to a computer and Microsoft Office. I also assume you have access to the web and check your email regularly.

Scantron
Red

Classroom Etiquette
Please turn off your cell phones. Please act in a professional manner: do not email, check facebook, etc. during class.
Please do not eat while we have a guest lecture or during a group presentation.

Contact Info
The easiest way to reach me is via email: lilly.meredith@gmail.com. I do not have an office at the University and therefore do not have scheduled office hours. I will be available before class or by appointment.

Academic Misconduct
Academic Honesty: The University of Houston's Academic Honesty Policy is strictly enforced by the Bauer College and by this professor. A discussion of the policy is included in the UH Student Handbook, https://www.uh.edu/dos/publications/handbook.php. It is your responsibility to fully understand and comply with all principles contained within this Handbook. Please make sure you understand this policy and in particular, you understand the meaning of plagiarism.

University of Houston Electric Power Markets Course

Objective: Obtain a thorough understanding of the U.S. Power Markets.

Class 1 – Monday, June 1

- Course overview
- History of the power markets
- Market Participants
- Discussion: Course input
- Reading:
  - http://instituteforenergyresearch.org/history-electricity/

Class 2 – Wednesday, June 3

- Regulation
- Deregulation
- ISO/RTO
- Generation
- Reading:
  - http://www.eia.gov/energy_in_brief/article/power_grid.cfm
  - http://en.wikipedia.org/wiki/Electricity_sector_of_the_United_States
  - http://www.eia.gov/energyexplained/index.cfm?page=electricity_in_the_united_states
  - http://seekingalpha.com/article/2214933-the-future-of-americas-power-markets-watch-texas?source=cc
  - http://www.ferc.gov/industries/electric/indus-act/rto.asp
  - http://www.eia.gov/energyexplained/index.cfm?page=electricity_delivery
  - https://ei.haas.berkeley.edu/research/papers/WP252.pdf
  - http://www.jbsenergy.com/downloads/does_deregulation_raise_electric_rates.pdf
  - http://www.econlib.org/library/Enc1/ElectricUtilityRegulation.html
  - http://americanhistory.si.edu/powering/generate/gnmain.htm

Class 3 – Monday, June 8

- ISO/RTO presentations
- Generation

Class 4 – Wednesday, June 10

- Transmission
- Storage
- Generation
- Discussion:
- Reading
  - http://en.wikipedia.org/wiki/Electric_power_transmission
  - http://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/primer.pdf
  - http://science.howstuffworks.com/environmental/energy/power.htm
  - http://en.wikipedia.org/wiki/Grid_energy_storage
  - http://www.economist.com/node/21548495?frsc=dg%7Ca
  - http://www.energy.gov/articles/energy-department-releases-grid-energy-storage-report

- http://www.abb.com/cawp/seitp202/0B6D46A05BBC3A27C1256FF2002FD2A0.aspx
- http://www.sbc.slb.com/SBCInstitute/Publications/ElectricityStorage.aspx
- http://www.world-nuclear.org/info/Country-Profiles/Countries-T-Z/USA--Nuclear-Power/

Class 5 – Monday, June 15

- Exam 1
- Green Energy
- Hedging and Risk Management
- Reading
  - http://www.investopedia.com/articles/optioninvestor/09/commodity-trading.asp
  - http://www.cmegroup.com/education/interactive/webinars-archived/fundamentals-of-energy-trading.html
  - List of books, just for your reference. http://bclund.com/2012/03/13/20-books-every-trader-should-know/
  - http://www.mckinsey.com/insights/energy_resources_materials/myths_and_realities_of_clean_technologies
  - http://theweek.com/article/index/261385/the-answer-to-americas-power-needs-solar-roads
  - http://www.mckinsey.com/insights/energy_resources_materials/the_disruptive_potential_of_solar_power
  - http://www.mckinsey.com/insights/energy_resources_materials/daniel_yergin_on_the_next_energy_revolution
  - http://www.mckinsey.com/insights/energy_resources_materials/myths_and_realities_of_clean_technologies
  - http://www.energybiz.com/article/13/06/new-technologies-and-approaches-will-change-electric-grid-forever

Class 6 – Wednesday, June 17

- Trading
- Risk
- Speaker: Campbell Faulkner, OTC Global

Class 7 – Monday, June 22

- Presentations: 10 Worst Trading Losses of All Time. Be prepared to discuss in detail. http://www.businessinsider.com/the-worst-trading-losses-of-all-time-2012-6?op=1#ixzz2ISoe9TrW
- Reading
  - Read Enterprise-risk-management practices: Where's the evidence? http://www.mckinsey.com/client_service/risk/latest_thinking/working_papers_on_risk
  - http://www.sungard.com/~/media/financialsystems/whitepapers/kiodex_article_fundsturntocommodities.ashx
  - http://www.sapient.com/assets/imagedownloader/557/Commodity_Risk_Management.pdf

- http://premiacap.com/publications/EDHEC_Working_Paper_Case_Studies_and_Risk_Management.pdf

Class 8 – Wednesday, June 24
- Speaker: Paul Janish, Meteorologist
- Making $

Class 9 – Monday, June 29
- Class Evaluation – smart phones or laptop to complete evaluation
- Environmental Impacts
- Emissions
- Security
- Health & EPA Concerns
- Reading
  - http://www.epa.gov/cleanenergy/energy-and-you/affect/
  - http://www.ucsusa.org/clean_energy/our-energy-choices/renewable-energy/environmental-impacts-solar-power.html
  - http://www.ucsusa.org/clean_energy/our-energy-choices/renewable-energy/environmental-impacts-solar-power.html
  - http://www.ucsusa.org/clean_energy/our-energy-choices/renewable-energy/environmental-impacts-wind-power.html

Class 10 – Wednesday, July 1
- Importance of Power Markets in the Economy
- Coloration between GDP and Electricity Demand
- Energy and the Economy
- Reading
  - http://www.agcs.allianz.com/insights/expert-risk-articles/energy-risks/
  - http://www.elcon.org/Documents/EconomicImpactsOfAugust2003Blackout.pdf
  - http://www.andersoneconomicgroup.com/Portals/0/upload/Doc544.pdf
  - http://www.ppic.org/content/pubs/report/R_103CWR.pdf
  - http://www.esa.doc.gov/Blog/2011/04/28/gdp-employment-and-energy-prices
  - https://www.uschamber.com/blog/double-whammy-epa-carbon-regulations-will-mean-higher-electricity-costs-fewer-jobs
  - http://www.washingtonpost.com/blogs/wonkblog/wp/2013/04/23/the-oil-and-gas-boom-has-had-a-surprisingly-small-impact-on-the-u-s-economy/

Class 11 – Monday, July 6
- Exam 2