CHEME 6672, Electric Power Systems

When?

Tuesdays and Thursdays from October 2 to October 30, 2014 from 8:40 to 10:00 AM

Who?

Michal Moore, Eilyan Batar, and C. Lindsay Anderson

Where?

Olin 245

Topics to be covered:

Electricity Markets and the implications of risk and uncertainty in finance and engineering

The Structure of Electric Systems including power flow models, system operations and economics

Changes in technology, from green to community scale distribution, with a focus on wind integration

Changes in planning and operations evolving to manage uncertainty in both load and generation

Regulation and Policy Initiatives

Waste and Carbon Markets

Limits and Qualifications:

a. successful completion of CHEME6660, permission of the instructor

b. interest and enthusiasm

Learn the SHOCKING facts about electric power markets and discover recent evidence of ABUSE.

Discover what all those wires criss-crossing the countryside are all about. Delve into the nature of electricity generation, fuel sources, transmission and distribution systems, as well as markets and pricing of electric power. Discuss decisions are made for all the elements of an electricity system, both in terms of operations and management as well as planning and investing to meet demand. A significant portion of the course will address the differences between so-called fossil fuel generation and renewable power and use this knowledge to frame the trade-offs between demand for electricity and environmental quality.