

Outline: Lecture 16

Date: May 19, 2011

Topic: Power Grid and Other Infrastructure

1. *No discussion section on Monday, May 23*
2. Cyber-Physical Systems / Control Systems
3. Supervisory Control And Data Acquisition (SCADA)
4. The legacy power grid
5. Some issues that have arisen:
 - a. Stuxnet
 - b. Project Aurora
 - c. PG&E pipeline explosion
 - d. Browns Ferry Nuclear Power Plant
 - e. Nuclear reactors in Japan, post-earthquake
6. Fault tolerance and redundancy
7. Follow the money: energy markets
8. The “smart grid” concept
 - a. The “renewables” / non-dispatchable energy problem
 - b. “Smart” meters
9. Whose problem is this?
10. Automobiles