

PHYS 350 Lab #8
14 March 2013

Part I. Reverse Engineer the Local Electrical Power Distribution System

During the 1st hour of lab, break into 2 teams of four and go out "in the field". One team should go down Bull Street to Ashley and then back up Montague. The other team should go down Montague and up Bull. Along the way, note every unique feature of the electrical power distribution system, discuss things, take pictures of things that you are not sure of. When you get back, prepare a brief summary and compare notes with the other team.

Be considerate of private property, don't touch anything or block the sidewalks. But if you see a team of students out there doing a historic preservation lab, feel free to muscle them off the sidewalk :-)

Part II. Comparing Statewide Models for Electricity Production and Policy

You will break into 4 teams of two. Each will be assigned a state. Explore the following issues pertaining to Electrical Power and write up your responses. Then assimilate all 4 teams responses into a single document. Each of you should then study the document and write up a 1/2 page or so essay comparing/contrasting the way these issues are handled in different states.

Note: If time permits, go beyond this list:

- How many public electric utilities are there? What non-utility producers play a significant role in the state?
- Who regulates the utilities (not just the name of the enterprise; find out a little bit about who they are and how they operate)?
- What mixture of energy sources is used in the state (e.g. percentages of coal, nuclear, etc)? Explicitly determine the fraction from "renewable" sources.
- What mixture of natural energy sources are available within the state (i.e. what can they produce without importing resources)?
- Does the state have a "Renewable Portfolio Standard" or other major renewable energy regulation? If so, what are the key provisions, how far along are they?
- What efforts are being made (or have already been enacted) to restructure the electric power industry in that state.