**Markets for Electricity**

**Essay Requirements and Example Topics**

Individual students or groups of students are required to prepare a short essay and provide an accompanying short presentation in class (at some point on or after the fifth class meeting) on any topic related to the subjects to be covered in class. Groups will include no more than three students. These essays/presentations will go into more detail on a topic covered in class.

I prefer short (<15 page, 1.5 line spacing) essays. Please keep your presentation to the class to less than 15 PowerPoint slides, or the equivalent. But, I’m hoping that you will provide something more than a simple summary of the analyses conducted by others. That is, I am hoping that you will contribute some independent thought, an intelligent critique of the materials that you have reviewed, and/or some analysis of data pertaining to the topic or some theory.

Before class on October 5 please send an email to me at [jayz@utexas.edu](mailto:jayz@utexas.edu) to let me know if you would like to:

* Work on the essay and presentation “on your own” (recommended for students who may wish to later apply for admission to a PhD program).
* Work on a group project, and you’ve already assembled a small group.
* Work on a group project, but you presently are not in a group. In this case, I may be able to match you with others looking for a group.

And, if you already have a topic in mind, please let me know what the topic is.

I will ask you or your group to select a topic and pick a date for your presentation. However, if you start pursuing a particular topic but discover that it isn’t feasible due to a lack of data or other reasons, let me know and you can switch to a different topic and/or date for the presentation.

Ideally, your presentation should be provided on the same day or the following class meeting that I cover a particular topic, as indicated in the syllabus. Nonetheless, we might agree upon a different date for the presentation to better spread-out the presentations, avoid scheduling conflicts, or for other reasons.

Please provide me with a draft of your presentation by Friday on the date prior to your presentation. This will give me an opportunity to review it prior to your presentation and provide any feedback. At the time that you make your presentation, you don’t necessarily need to have all of your analysis completed. Part of the purpose of the presentation is to receive feedback from the class. The presentations will not be (explicitly) graded. Your written essay can be submitted at the end of the semester (after the final class meeting), providing you with some time to consider any changes suggested by the class and write-up the essay.

I suggest that you organize your essay around an economic or policy question.

The following are some suggested topics for essays. It might be difficult to fully-address some of these questions in a short essay, give your time constraints. Yet, you might be able to address some elements of the question. If you can develop a better question than those listed here based on your specific interests, past projects, or work experiences, that would be great!

* What factors do consumers consider when selecting a retail electric provider in the areas of Texas opened to retail competition? (Great topic. But, I’m not sure about good data sources.)
* Critique the Power to Choose website, used to screen retail electric providers in Texas.
* Are capacity markets really needed? Is the success of Texas, Alberta, and Australia (at least, so far) without establishing a capacity market proof that an “energy-only” wholesale market will suffice?
* Has the introduction of competition into the retail segment of the electric utility industry led to lower prices? (This could be an ambitious topic. But, perhaps a meta-analysis is possible.)
* What are the lessons learned from attempts to introduce competition into \_\_? (Pick your favorite electricity market.)
* Should residential electric rates include a demand charge? What are the “pros and cons” of doing so?
* How are markets for tradable credits for energy efficiency achievements (a.k.a., white certificates) in Europe and a couple U.S. states working? Might such a market work in Texas?
* Why haven’t attempts by the Trump administration to save coal plants worked?
* How are retail electric providers in the competitive Texas (ERCOT) electricity market using prices and value-added services to differentiate themselves from competitors?
* Why might prices diverge between real-time markets and forward markets for electricity?
* Pay-as-bid versus market-clearing prices in electricity auctions. Does our experience support the theory that the outcomes of the two are little different following some initial auctions? Are our observations consistent with economic theory?
* What are some least-cost options available to Texas (or, wherever) to reduce its carbon footprint?
* What discount rates do consumers place upon investments in energy efficiency?
* When a nation or region faces a supply shortage (e.g., Japan after the Fukushima nuclear power plant disaster; various countries in South America where droughts have affected the availability of hydroelectric power), how do consumers adapt?
* What impact might higher penetration of renewable energy technologies (e.g., solar and wind) have on market prices for electricity in Texas (or wherever) based on prior studies of the merit order effect? (There have been a lot of previous studies on this topic.)
* When does solar PV make economic sense to homeowners? Are we there yet in Texas?
* What are the economics of battery storage? When might home batteries become economical to homeowners (in combination with time-of-use rates and aggregators who can offer various services into an electricity market)?
* What regulatory actions should be taken to accommodate households which are both consumers and producers of electricity (prosumers)?
* How might policies to promote energy storage in ERCOT impact the market and resource adequacy?