

ENCO 4364 Final Exam Review

TERMS / BASIC CONCEPTS

Electric power system:

capacity factor

congestion

contingency analysis

economic dispatch

generation

transmission

megawatt (MW)

megawatt-hour (MWh)

ERCOT

Public policy issues:

Energy Policy Act of 1992

Production tax credit

PURPA

Renewable energy credits

Restructuring

Wind power:

anemometer

nacelle

rotor diameter

wind rose

wind turbine

cut-in speed

cut-out speed

rated wind speed

TOPICS FOR SHORT ANSWER AND DISCUSSION QUESTIONS

Electric power systems and generation technologies: You should be able to list common conventional and alternative methods for producing electrical power and describe basic characteristics of each. I expect you to have a general idea of the significance of the different generation technologies within the U.S. and in Texas. (The generation methods we have discussed most in class are: coal, natural gas, nuclear, hydropower, wind, concentrating solar power, photovoltaic power, and geothermal.)

In addition, you should have a deeper understanding of wind power. For example, you should know the basic relationship between wind speed and wind power, have a sense of factors influencing the siting of a wind power project, understand why transmission is often very important to the success of a wind power project, and know why wind power projects are sometimes unpopular with some environmentalists, neighbors to the project, and some power systems operators.

Policy issues: You should be able to list the key public policies affecting renewable power generation and identify the role played by these policies in shaping the electric power industry. What does Komor think is “the case for policy intervention” in support of renewable power?

Have an opinion on whether the state and federal policies supporting renewable power in Texas have been a good thing, all things considered, be able to support your position, and understand the best arguments against your position.

Why do both Komor and Giberson think that “restructuring” is a better term than “deregulation” for describing changes in electric power regulation?