Review Questions #2

1. What is the primary difference between conventional and unconventional oil and gas? Explain. Why is this called a game changer?

2. What are the primary causes of the shale gas revolution? What explains the timing of this revolution? What are the key technological factors? What are the key economic factors?

3. What are the major differences in the economics of conventional and unconventional deposits? Explain. What are the implications of the high decline rates in unconventional deposits for profitability?

4. What are the key factors that account for the uncertainty over the amount of unconventional oil and gas that may be recovered? Why is it so hard to forecast at this point?

5. Some people argue that the appreciation of oil prices in the last decade was due to the increased demand for oil futures by speculators. Does this argument make sense? Explain. What is the relationship between paper markets for oil and physical markets for oil, if any?

6. "If the oil market is best likened to a bathtub, gas markets are spaghetti." Does this make any sense? Explain.

7. What is the resource curse? Why would anybody expect that abundant natural resources is a curse? Explain.

8. How is the resource curse identified empirically? Why is there good reason to be skeptical about the resource curse?

9. What has happened to energy intensity $\frac{\text{Energy Use}}{\text{GDP}}$ in the U.S. during the 20th century? Was production more energy intensive earlier or later in that century? What is the relationship between world energy consumption and world GDP during the 20th century? What does this tell us about the importance of energy for economic growth?

10. Why are natural gas markets plagued with hold-up problems? What is the nature of the hold-up problem? What are the typical solutions that are observed to hold up problems?

11. Why was LNG considered to be a game changer in the natural gas markets? What features make LNG special? Explain.

12. Why is unconventional gas considered to be a game changer? Explain.

13. "The U.S. is at the forefront of the unconventional revolution. By 2020, shale sources will make up about a third of total U.S. oil and gas production...By that time, the U.S. will be the top global oil and gas producer, surpassing Russia and Saudi Arabia, PFC predicts. That could have far-reaching ramifications for the politics of oil, potentially shifting power away..."
from the Organization of Petroleum Exporting Countries toward the Western hemisphere. With more crude being produced in North America, there’s less likelihood of Middle Eastern politics causing supply shocks that drive up gasoline prices.” Assess this statement.

(a) Why is the statement misleading about the impact of potentially large US reserves?
(b) How do you assess the prediction that supply shocks will be less likely to result from the Middle East?

14. Why are volatile oil prices likely to be the norm in the foreseeable future?

15. Why does Russia invest in new pipeline routes, like NorthStream and SouthStream, rather than expand the capacity of the existing pipelines?

16. Why does Gazprom have an interest in convincing Europe that it is a reliable gas provider? Why does Europe have an incentive to diversify its gas supplies? Why does enhanced energy security threaten energy security? (I really did write that, no typo).