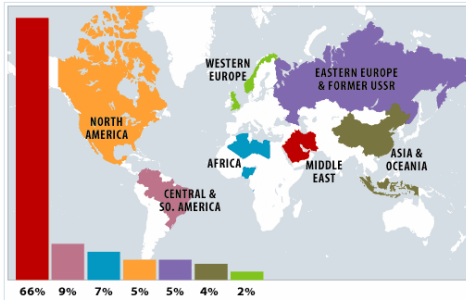
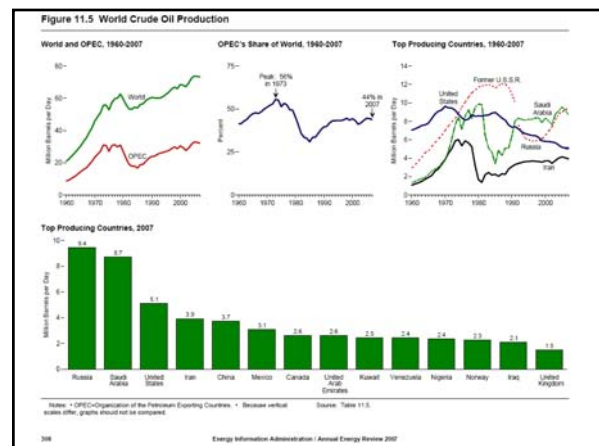
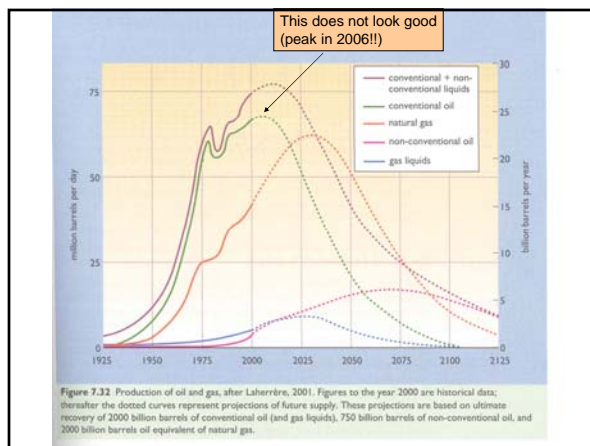
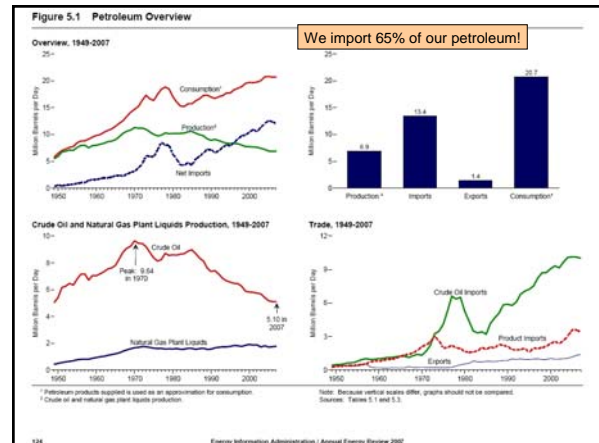
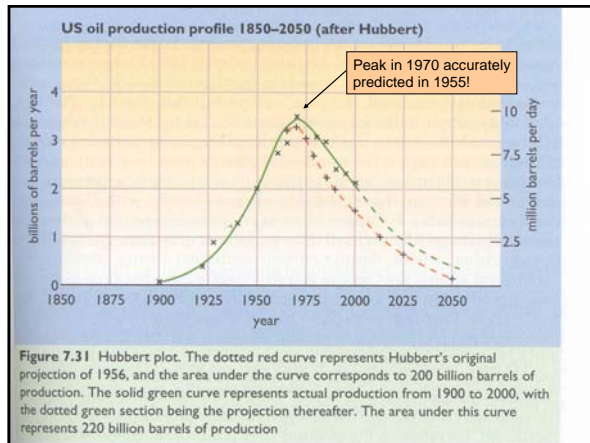


## Class 7

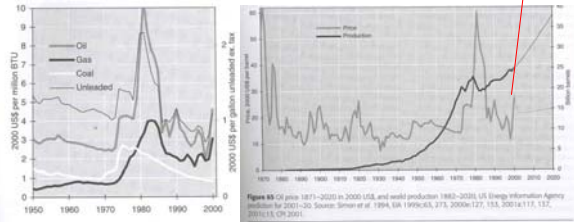
### Where Are the World's Oil Reserves?



## A. Hubbert's Peak



## B. Skeptical Environmentalist



From The Skeptical Environmentalist

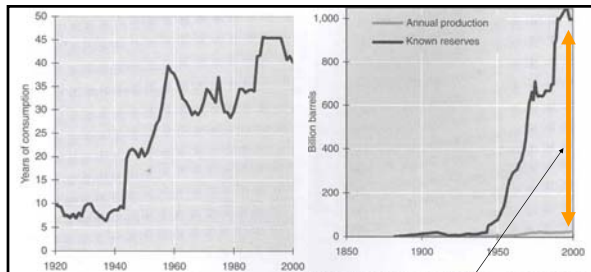
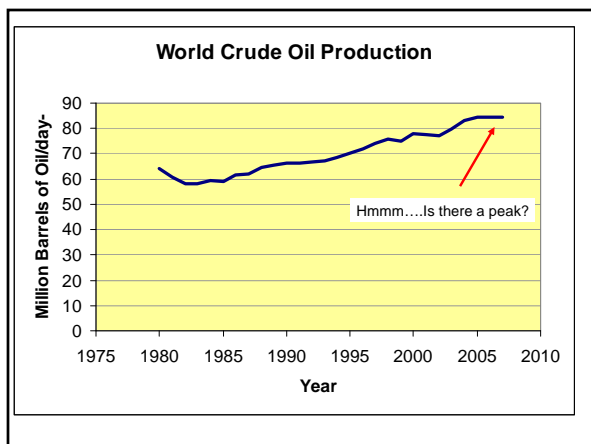
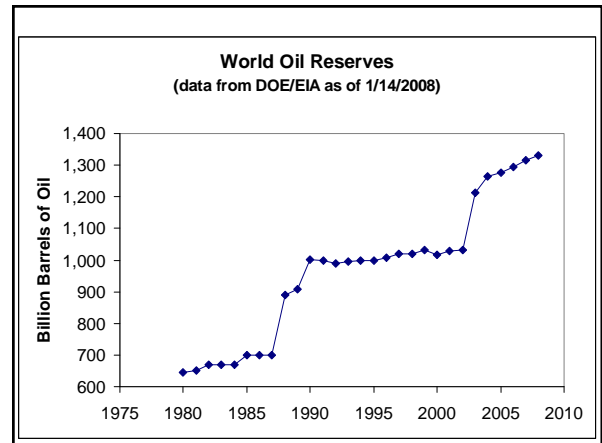


Figure 66 Years-of-consumption: world oil reserves compared to the annual production, 1920-2000. Source: Simon et al. 1994, EIA 1997b:Table 11.3, 11.5, 1999c:271, 2000d:277, 2000a:109, 2000c:136, 2001a:137, 2001b:113. Total reserves until 1944 are only American, since 1944 for the entire world.

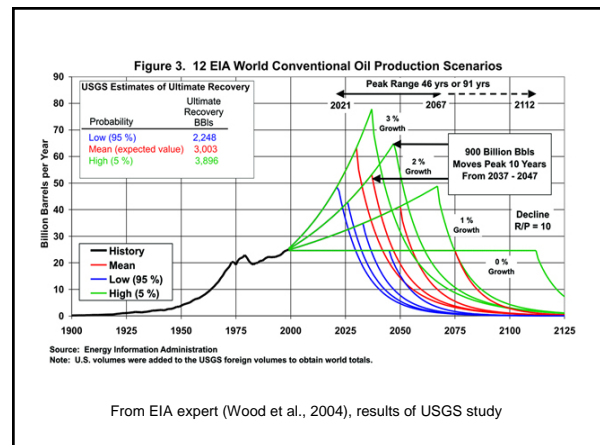
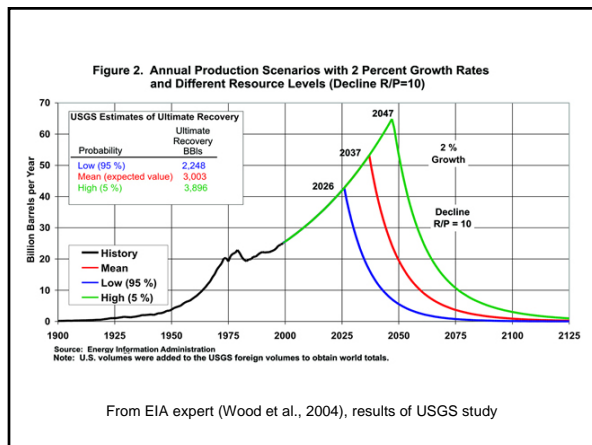
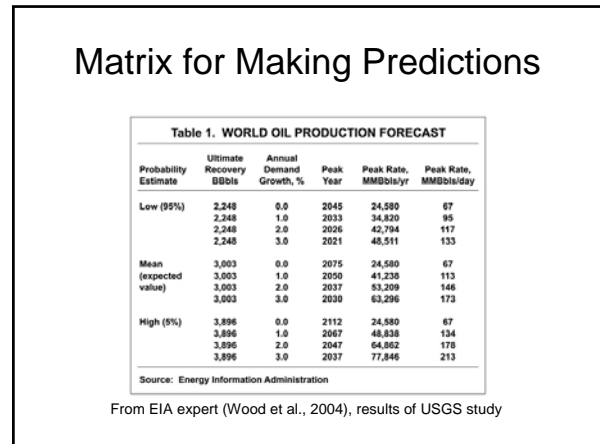
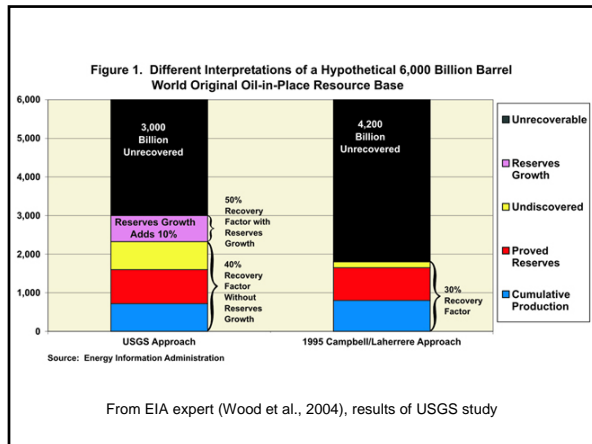
Figure 67 The world's known oil reserves and world oil production, 1920-2000. Source: As Figure 66.

No worries?

From The Skeptical Environmentalist



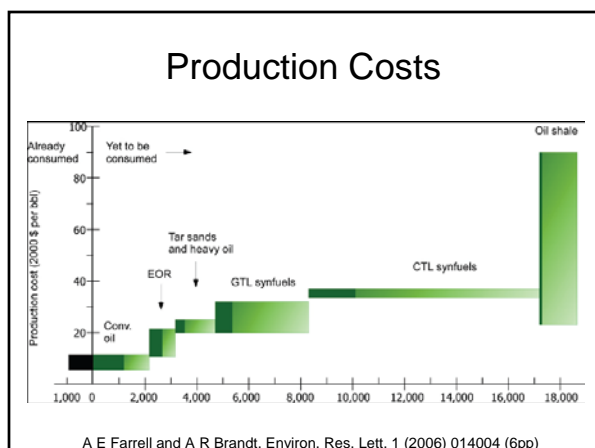
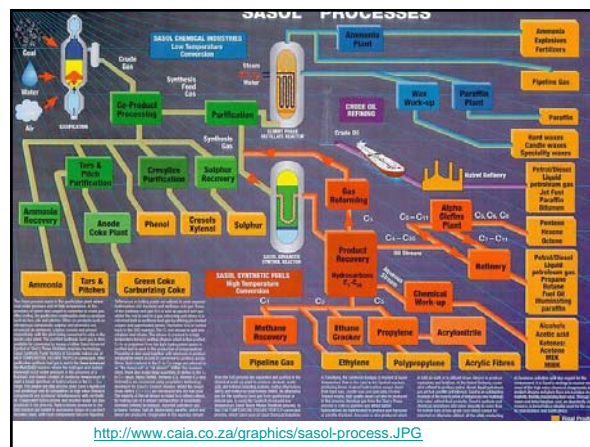
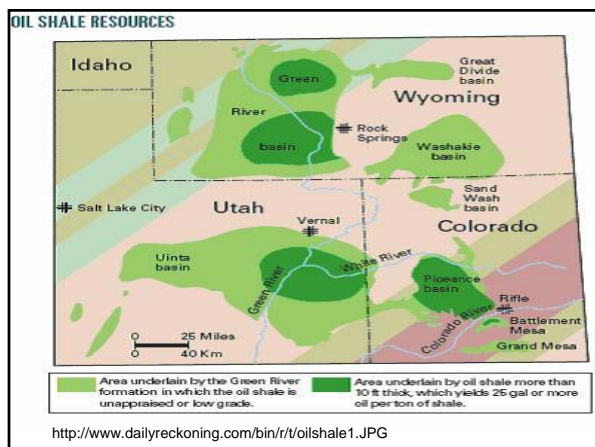
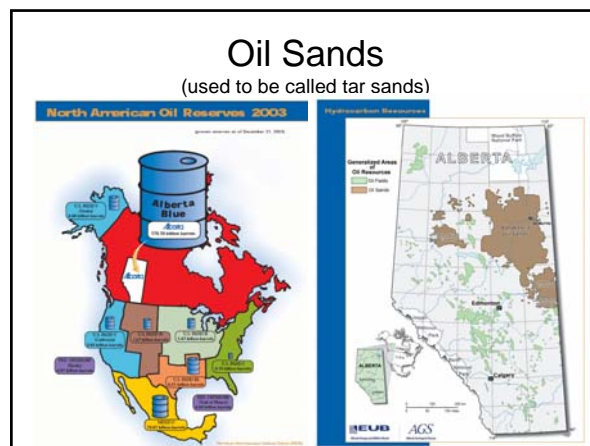
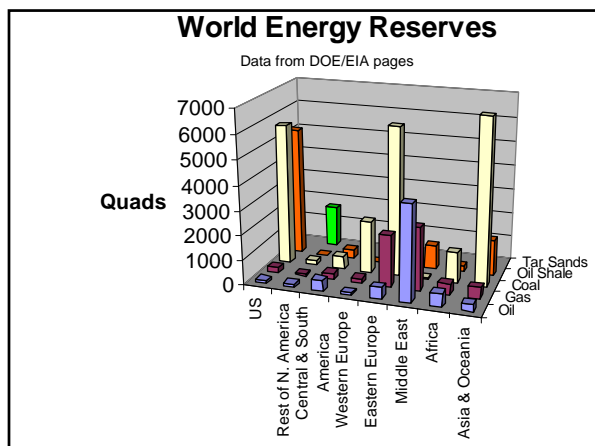
## C. DOE/EIA Expert



## Who Is Right?

- Hubbert extension – 2006
- EIA expert – 2037 ± 10
- Skeptical Environmentalist – no worries

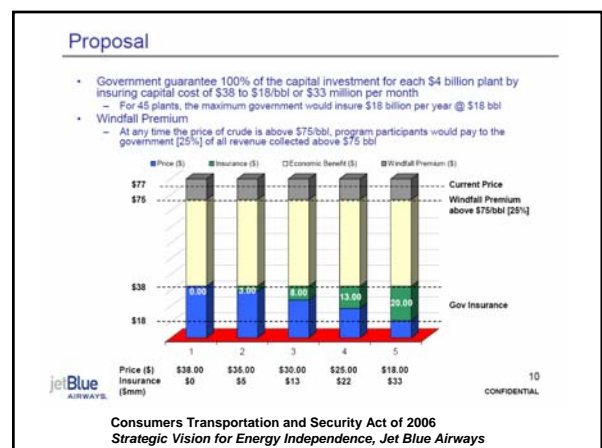
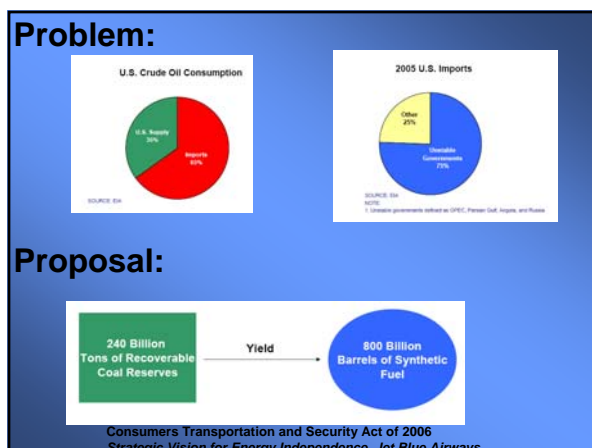
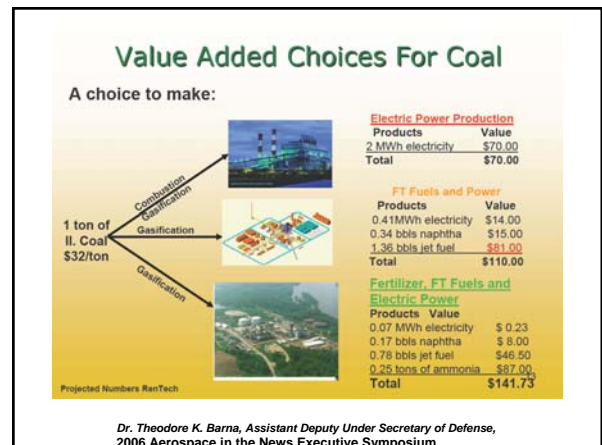
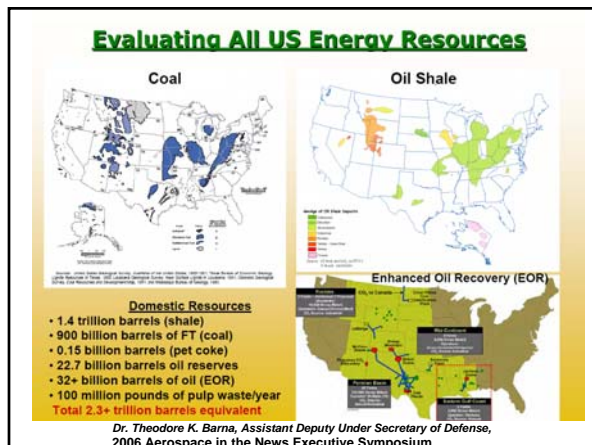
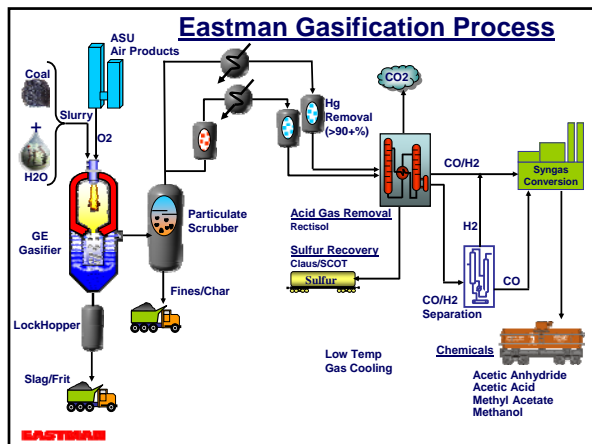
## Alternatives?



## EASTMAN

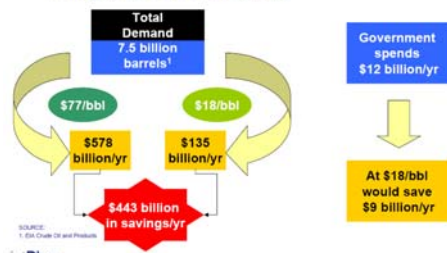
- Prior to Coal Gas, all acetyl chemicals made from petroleum
- Start-up of complex in 1983 (1/2 of acetyl demand)
- Expansion of downstream plants 1991, (100% of acetyl demand)
- Debottlenecking - 1991 to Present  
Approx. 1240 Tons/Day of Coal converted to  
Higher Value Chemicals ( $\text{Ac}_2\text{O}$ , HOAc)





## Economic Impact

- If fuel decreases from \$77/bbl to \$18/bbl, the consumer would save \$443 billion dollars



Consumers Transportation and Security Act of 2006  
Strategic Vision for Energy Independence, Jet Blue Airways