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e2: growing energy

APES questions e2 growing energy

http://physics.hpa.edu/physics/apenvsci/videos/e2_videos/e2%20energy/

1. What is the basic difference between biofuels and fossil fuels?
2. What is the time frame for collection of solar energy for fossil fuels vs. biofuels?
3. Brazil has a unique climate, and uses a crop that is native to the area. Compare this with corn ethanol in the Midwest US
4. Why is corn ethanol so popular in the farm states, and why is there national policy around it?
5. Steven Chu: look this guy up. Where did he used to work in 2007, on what, and what was his job in Obama's administration?
6. Compare cellulosic ethanol with sugar cane or corn ethanol
7. What is the energy balance of corn ethanol as grown in the US? Does this make sense? Why/why not?
8. Harbors provide ethanol free gasoline. Why?
9. What caused the 1973 oil crisis?
10. PETROBRAS is the national oil company of Brazil. How does this change the rate of progress in their ethanol solution? What kind of government did Brazil have then?
11. What is the population curve of Brazil?
12. Why did VW move to biofuels instead of hybrids? What has happened since then?
13. What is a CAFE standard, and what what was made exempt from these standards in 1995? Why?
14. Does ethanol provide the same mileage as gasoline? Why?
15. Imagine a developing country with no fossil fuel resources. How could biofuels impact their development?
16. Dan Kammen of UC Berkeley describes a repetitive trend in renewable energy. What is the trend?
17. Where is the first caucus of the US election held? What is their main industry? Why is this important?
18. When corn ethanol use was legislated, the price of tortillas in Mexico went up tremendously. Why?
19. How can cows derive energy from grass? How many stomachs do they have?

20. Look up the FAME biofuel process. What impact could this have?