

Name 3 problems with nuclear energy.

Where are the best places to live in the US in terms of heating and cooling days?

What are some characteristics of biomass?

After looking online, a 5.875% 30 year fixed rate loan for a home appears to be fairly good loan. (Assuming that you found a home priced at \$220,000.) What would be your monthly payment for such a home? Assume that the interest is compounded monthly.

What percent of the US electricity is produced by coal? If you were a politician, would you recommend a different resource to become the producer of electricity in the US? If so, what resource and why? If not, why not?

Is a hydrogen economy feasible? Why or why not?

Discuss the benefits and challenges to further development of renewable energy sources.

Discuss why nuclear power is no longer heralded as the solution to our energy problems.

Discuss (in twenty words or less) why fossil fuels cannot be completely phased out across the next 20 years.

What does IGCC stand for?

Why don't we just switch to nuclear?

In burning black liquor, what element is recycled?

Give the definition for primary energy.

What is a moderator as it relates to nuclear power?

What is the purpose of the consumer price index?

About what percentage of US electricity comes from coal? NG? nuclear? hydro?

What are the major sources of biomass energy in the US? Which is the largest? (3)

Explain why the US uses so much more coal (as a percentage) than the UK.

Why is nuclear such a pursued option for those in the informed population?

Why is biomass such a popular topic in the power industry?

What are methods of reducing CO<sub>2</sub> emissions? What are the possible problems associated with these?

According to the DOE, is the percentage of electricity generated from biomass going to increase in the next 20 years?

How are GDP and energy use related? Explain what is meant by GDP.

Describe the difference between direct and indirect solar energy and give examples of each.

What was Hubbert's prediction? (2) How does it relate to the US?

Rank the three major sources of hydrogen according to current costs.

How much of fossil fuels, nuclear, and renewable energy does the US produce and consume?

Define heating degree-days per month?

How is hydrogen created?

What are the 6 most important pollutants? (3) Describe methods for reducing two of these pollutants from the stack gas.

What is the conversion from the energy content of a fuel to what we get out as electricity?

From what source does the US get most of its energy? How could this be a problem?

If we knew we were going to run out of coal in 10 years, which energy source would be the most suitable to replace it?

What is the world's largest source of energy?

Which is the most efficient source of light (lumens/W)? A. Candle B. Light bulb C. Gas mantle

List the top 4 US energy sources from largest to smallest and indicate the percent of total US energy that they supply. (2)

If 40.77 Quads of energy were used in the US to produce electricity and 14.2 Quads were obtained, what was the overall efficiency of the electricity generating process?

List the relative costs per kW-hr of the nuclear, coal, NG, and wind for electricity generation.

What do you feel is the best combination of energy for the US? Defend your answer.

Will we ever run out of oil?

What is CO<sub>2</sub> sequestration? Why is it needed? Give proposed methods for how it is done with advantages and disadvantages?

T/F – The coal facility on campus burns coal for electricity generation.

From which country does the US import the most oil?

Match these geographic areas with the kind of unconventional oil resource found there

Utah/Wyoming	heavy oil
Canada	oil shale
Venezuela	tar sands

According to the present value, if we have \$200 today and the interest rate is .008, how much money will we have in 17 years?

Where do you stand on nuclear power?

What is the difference between light water and heavy water nuclear reactors?

What are the two most prevalent non-renewable energy resources in the US?

Why is valuable NG flared away at oil wells in place like Nigeria and the Middle East?

What gas has the biggest impact on the earth's temperature?

How many people died from radiation poisoning as a result of the accident at the Three Mile Island nuclear power plant?