**EAS 375**

**Lecture Question**

**Portal to the 21st Century: What does the future hold for the world of Energy?**

What are the major problems associated with continued growth of energy consumption in the 21st century?

- Depletion of easily extracted oil resources.

- Transfer of financial wealth from consuming nations to producing nations

- Environmental consequences of expanding use of fossil fuels and nuclear

- Problems of developing alternative energy sources

- Acceptance of changes to be made in our lifestyle

What is meant by the phrase - sustainable energy system?

Meet humanity’s essential energy needs **indefinitely**, **cleanly**, and hopefully at a **reasonable cost**.

What does EROEI mean?

Energy returned on energy invested – Fossil fuels have exception high EROEI

How will “personal attitude” affect our production of energy in the 21st century?

People have to be willing to listen and learn

Recognize that nuclear will play an important role

Changing from fossil fuels to alternative energy will take time and we will be using fossil fuels for decades

What is green energy?

Can be extracted, generated and/or consumed without any significant negative environmental impact

What is renewable energy?

Energy that meets the needs of the present without compromising the ability of future generations to meet their needs

What are the negative effects of the use of renewable energy?

* Production/disposal problems
* Resource needs (rare earths)
* Loss of food production (corn to ethanol)
* Environmental impact (habitat loss and species extinction)
* Accepting the fact that environmental compromises will have to be made
* Lifestyle changes