Rising energy insecurity

**Develop an awareness that energy security depends on resource availability and with finite non-renewables, insecurity is only going to increase with time**

**Energy security has a number of risks:**

1) **Physical** – exhaustion of reserves or disruption of supply lines

2) **Environmental** – Protests about environmental change caused by exploitation of energy resources

3) **Economic** – sudden rises in costs of energy forcing increased imports of higher-priced energy

* MEDCs:

The USA shows huge demands for energy resources. In 2007 USA consumed 23.8% of the world’s oil. Germany and UK have improved their energy efficiency resulting in a modest increase in demand.

* Emerging countries:

China accounts for a third of the growth in global oil demand since 2000. Demand for oil in China is expected to rise by 5-7% a year.

* Developing Countries:

Most are struggling to pay for their energy requirements. Energy demand is influenced by rate of economic development and rate of population growth. Two billion people in the world lack access to household electricity. Traditional biomass in these countries accounts for 90% of total energy consumption

4) **Geopolitical** – political instability in energy-producing regions

The energy security of a country can be measured using the ‘Energy Security Index’ (ESI). The higher the index, the lower the risk and therefore the greater the energy security. This is based upon:

- Availability – the amount of a country’s domestic oil and gas supplies and its level of reliance on imported resources

- Diversity – the range of energy resources used

- Intensity – the degree to which the economy of a country is dependent on oil and gas

**Over to you:**

1. Energy security is a global problem. The energy issues seen in California are common across a range of developed countries. Read about Energy Security in the USA (Parrot, page 6-10). Then identify the factors that threaten American energy security.

2. Explain why energy security is a global problem.

List the factors which led to the Californian blackouts of 2000/2001.

3. Research whether blackouts have again affected Californians over the last decade, if not what solutions have been found to manage energy supply in the USA?

4. Between 1960 and 2003, America’s reliance on imported gas and oil increased by 18% to 58%, explain why this not a good energy strategy.

5. Explain how Enron’s involvement in the energy supply market caused the flow of energy to collapse in California

6. Write a minisaga (a summary in 50 words) explaining the energy problems facing the USA.

**Definitions:**

**Geopolitics** - Political relations among nations, particularly relating to claims and disputes regarding boarders and resources

**Low-carbon standard** - Initiative introduced in California in 2007 aimed to reducing the carbon intensity of transportation fuel by 10% by 2020