

The nation faces these grand challenges: energy, water, climate change, living with earth hazards, and national security.

#### energy

- secondary recovery
- coal issue
- wind
- solar
- fuel cells
- hydroelectricity
- tidal energy

the US needs to develop an energy portfolio

#### water

- freshwater
- clean water

#### climate change

- risk assessment across time scales
- mechanisms of climate change and guidance
- paleoclimatology

#### hazards

- earthquakes and tsunamis
- volcanic
- flooding
- coastal
- subsidence
- land stability

#### biological processes

the geosciences are essential to the understanding of many other sciences  
the geosciences informs most of the sectors of the economy, including  
insurance, medicine, finance, agriculture, energy, winemaking and beermaking.

Suggested hype material:

Geoscientists can bring to bear unique capabilities to solve problems based on large and often incomplete datasets.

The discipline is changing in response to changing national needs.