

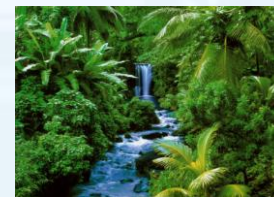
A photograph of Al Gore speaking on a stage. He is wearing a dark suit jacket over a light blue shirt. He is gesturing with his right hand. Behind him is a large screen displaying a satellite-style image of the Earth, showing the Americas and parts of Europe and Africa. The background of the entire slide is a blue, rippling water texture.

The Green Movement

Al Gore: The man, the legend...

The Great Escape from fossil fuels

- 86.4% share in world energy consumption
- Depleted far faster than produced, some aged up to 650 years
- Major environmental concerns
- =REALIZATION OF THE NEED FOR AN INCONVENIENT MOVEMENT

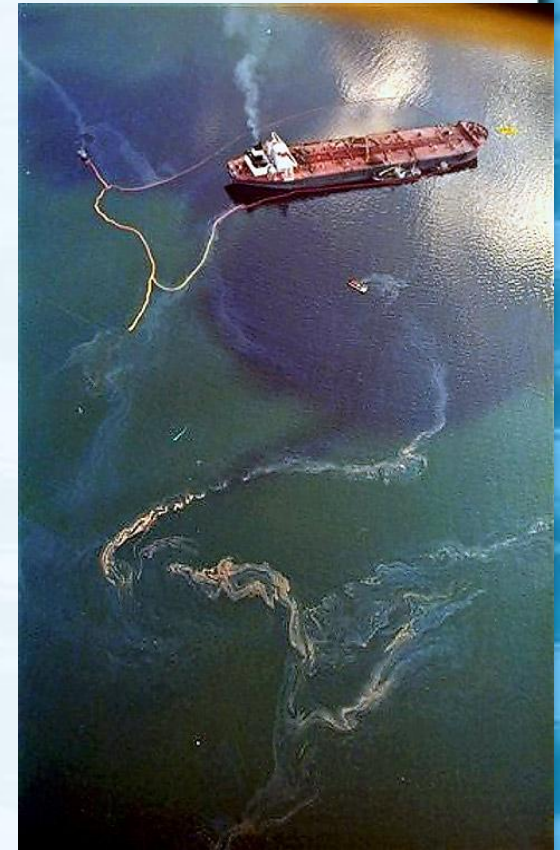


The status quo – the pros and cons

- Oil is highly combustable and very efficient, more so than coal
- Not as cheap as coal, but (usually) cheaper than newer, emerging fuels
- Widely used, the infrastructure is there

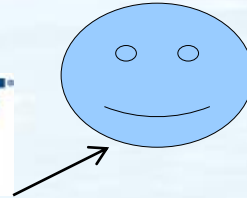
The problems of oil

- Getting harder and harder to find
- Drilling can destroy habitats
- Combustion=emissions
- Price fluctuation/instability
- Environmental disasters



Coal Power

- THE CHEAPEST



- Easy to mine
- 40% of world electricity (38 and 17 percent of this is China and the USA)
- Represents 1/3 of EU electricity
- CO₂ is the least toxic greenhouse gas..except coal emits it in high volume!!!
- China problem...loss of World Bank support



Nuclear: very toxic! Even politically...



- Very misunderstood: nukes vs. nuclear ENERGY!
- America & others avoid since Three Mile & Chernobyl...worldwide backlash against
- Not dependent on fossil fuels (therefore not subject to oil+gas price fluctuations)
- Barely any emissions
- LESS RADIOACTIVITY THAN COAL

Three Mile & Chernobyl



Natural Gas: because natural always means better

- Methane
- “The cleanest of the fossil fuels”
- New, cheaper, cleaner ways to extract
- US=Biggest customer, 2.=EU 3.=Russia
- Russia has MASSIVE reserves...EU generates it, but most of it comes from Russia through Gazprom
- CO deaths, explosions





Solar Power: more than a novelty?



A vision --- commercialization

- Just 0.02% of world energy in 2008
- Low efficiency in commercial use, now tests up to 40% from 20s
- No fossil fuel dependence (just during the manufacture)
- Easy to predict light pattern, but other power needed at night
- Expensive startup...panels last 10-15 years



Wind power

- Don't disturb the masses
- On farmland, offshore, airborne
- 2% of energy now, doubled in 3 years
- Lots of positives
- Non-dispatchable
- EU “leapfrog” plan 2020, Pickens Plan
- “Socially responsible” manufacturers pay premium to utilities to subsidize this

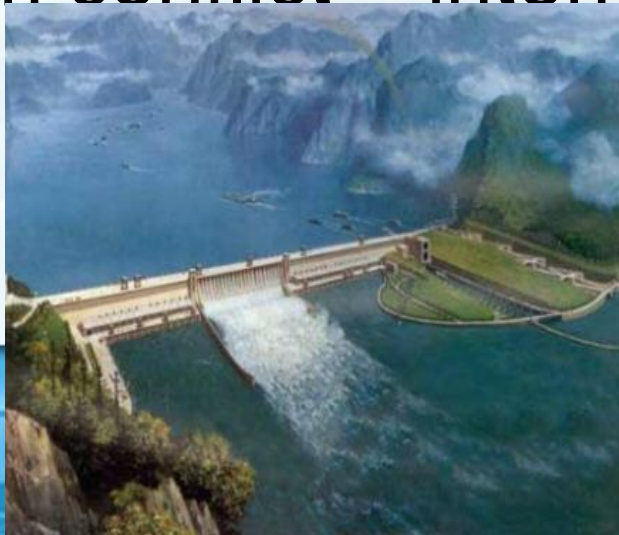


Hydropower

- 20% of all electricity in 2006
- 88% of renewable energy
- Least co2 output of all (2=wind,3=nuclear,4=solar)
- Immune to gas/oil price hikes
- Few personnel needed, long econ life, water easy to predict

Cons/China

- Dam failures are very, very bad
- Flooding upstream
- Migratory fish – econ effects
- Relocation of people
- Downstream conflict – international problems





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