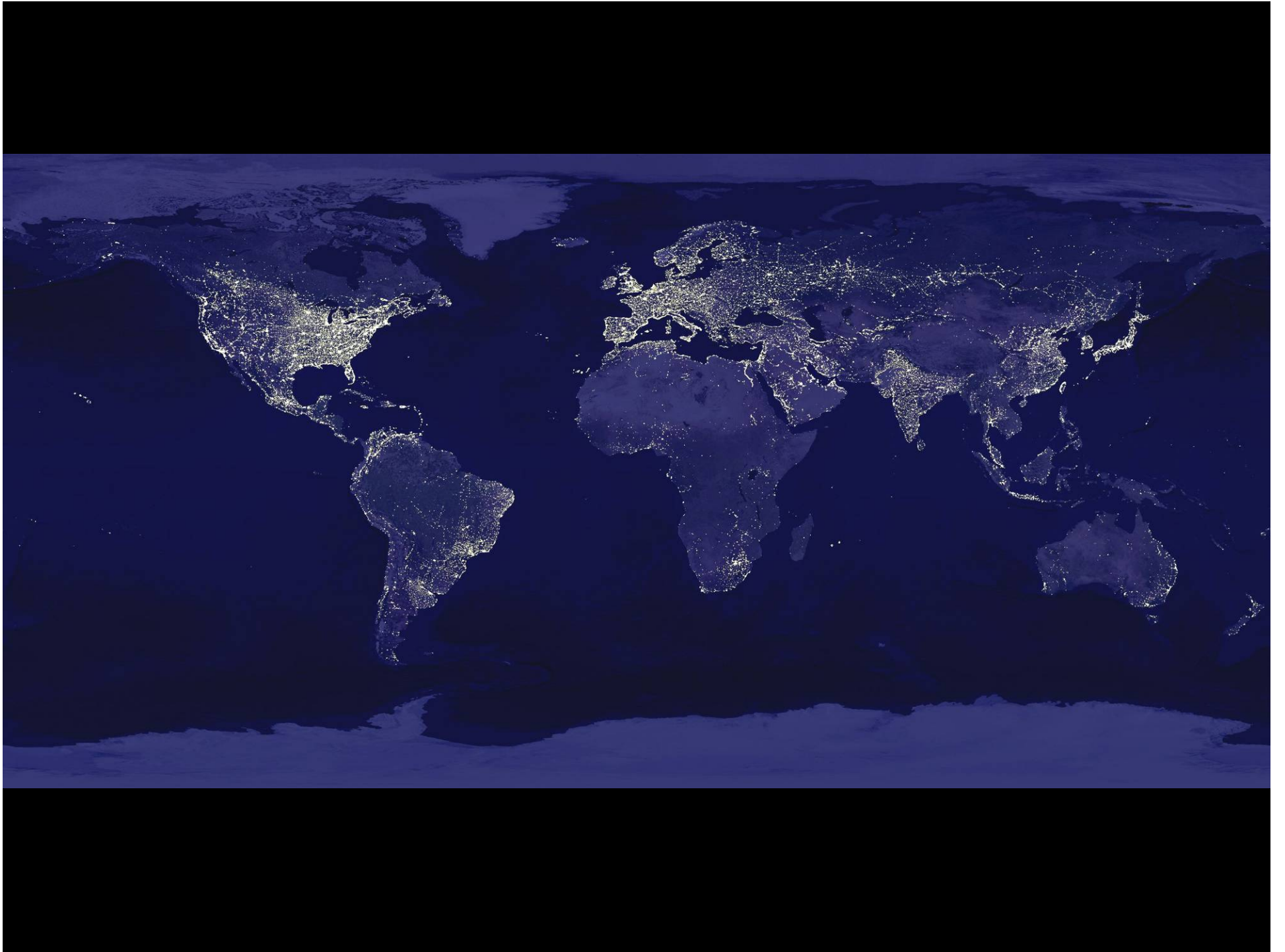


Canada in the World of Energy

- 5th largest producer of energy and energy resources
 - largest uranium producer – 1/3 of global supply
 - 2nd largest hydroelectric – 13% of global total
- 5.8% of global energy is produced in Canada or from Canadian resources
 - 4% of global electricity produced in Canada
 - Canadians are 0.5% of global population
- Canadian energy sector
 - 5.9% of GDP
 - 20% of annual new investment
 - 100,000 directly employed



Fun Facts

15 man-hours – the muscle power equivalent to 1 kWh – the economic leverage provided by energy – 10 cents per kWh versus \$154 per 15 man-hours

energy density underlies energy economics

- **50 BTU** – the energy released by 1 kg of elastic bands unwinding
- **25,000 BTU** – the energy released from burning 1 kg of coal
- **50,000 BTU** – the energy released by burning 1 kg of gasoline
- **500,000,000 BTU** – the energy released by fissioning U-235 in 1kg of natural uranium

2.6 %, 54 million acres or 469 km x 469 km - the portion of the Sahara Desert taken by photovoltaic cells (present technology and efficiency) sufficient to supply total global energy requirements – we have a distribution problem and not a supply problem

Technology and Elasticity of Supply

“In modern conditions of high elasticity of both production and substitution..... we now generally do create overproduction of whatever politicians and pundits 5-10 years earlier thought would be most urgently needed...”

“*The Coming Glut of Energy*”, *The Economist*, January 5, 1974

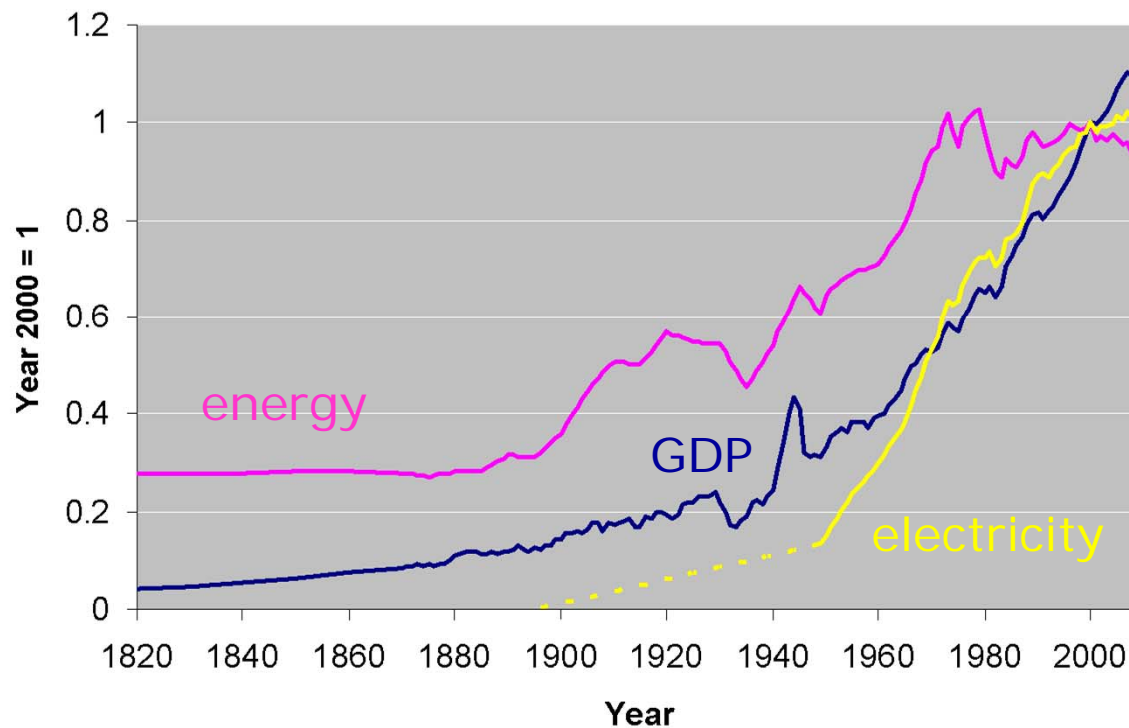
- a product has high elasticity of supply when:
 - it can be produced in many ways,
 - involves technology poised to bring in more ways,
 - has a distribution system with improvement potential,
 - is used in many modifiable ways
- i.e. universe of options for responding to price or influencing price is enormous
- marginal change triggers realignments within the current spectrum of options
 - AND IF PERCEIVED AS LASTING
 - opens up new overlapping spectrums of options

“For the last 200 years, energy seems to have had a higher elasticity of supply than anything else”

“*The Coming Glut of Energy*”, *The Economist*, January 5, 1974

Growth Correlation

US per capita GDP, Energy and Electricity



1973 Oil Embargo – Adaptive Consumption

