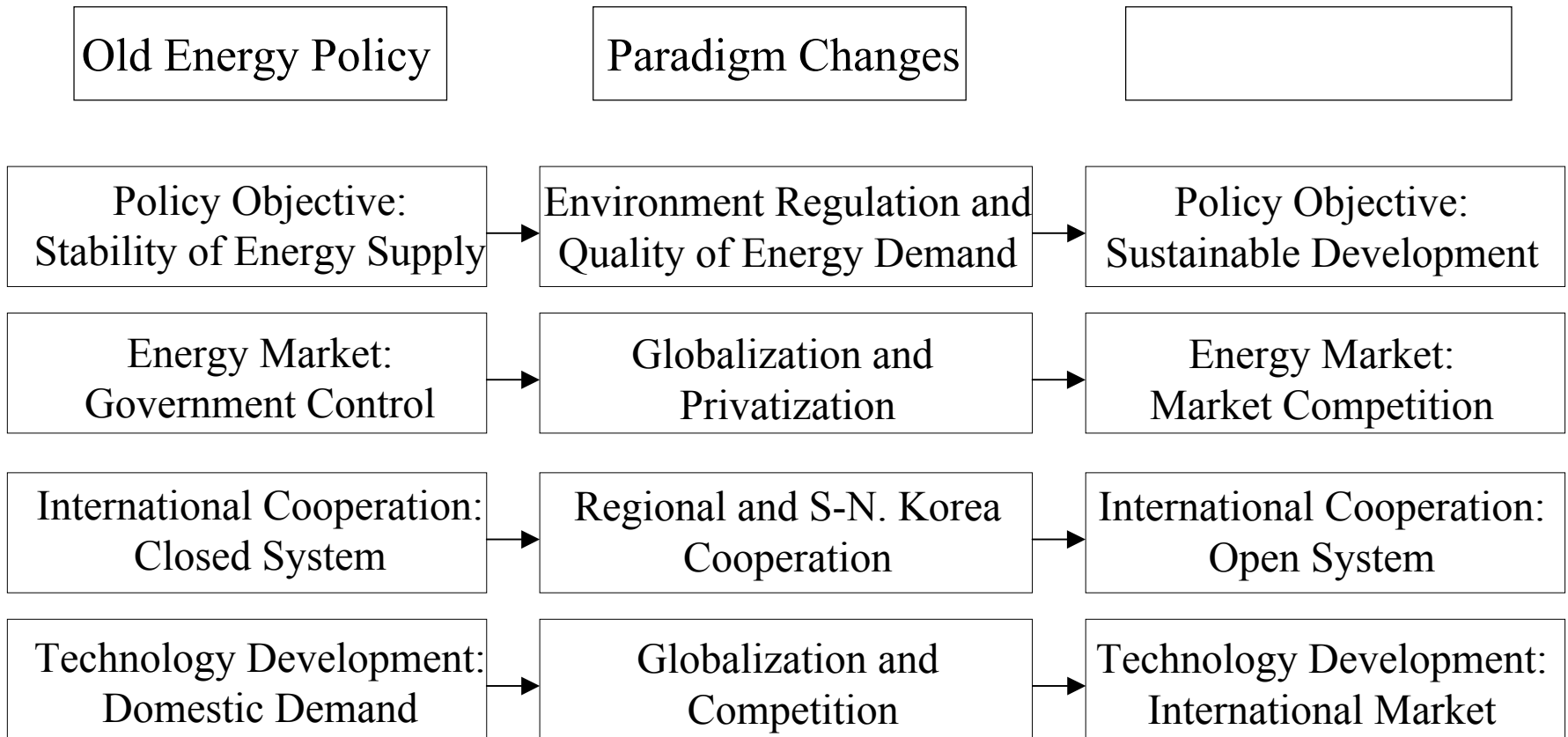


Update on Energy Sector Activities and Plans in the Republic of Korea

Jungmin KANG

Energy Paths Analysis/ Methods Training Workshop
Vancouver, Canada
November 4 to 7, 2003

Energy Vision 2010: A New Energy Policy



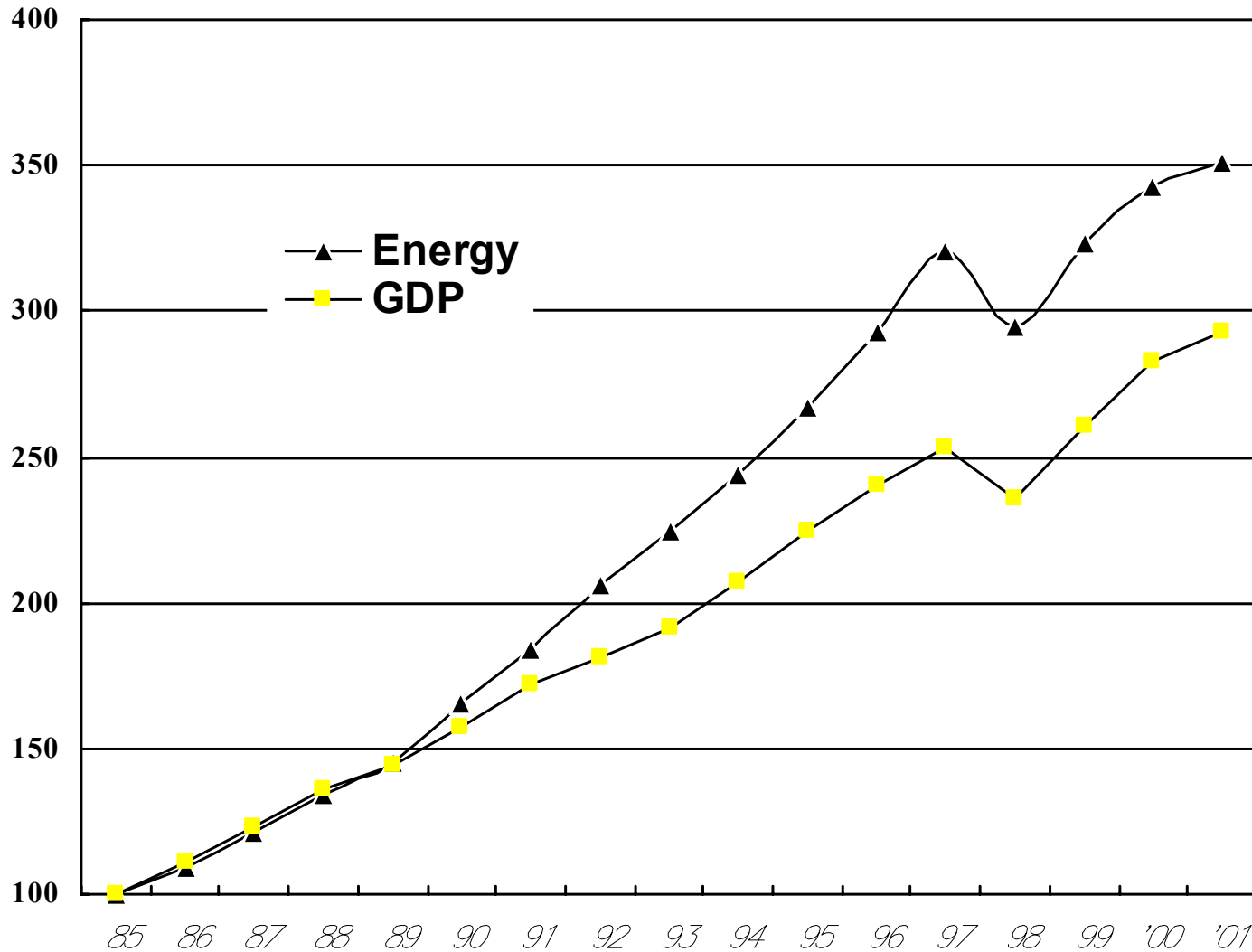
Highlights in Energy Vision 2010

- Sustainable Development
 - Establishment of environmentally friendly energy system
 - Improvement of energy efficiency
 - Encouragement of renewable energy
- Market Competition
 - Restructuring and privatization of the energy industry
 - Establishment of independent regulatory organization
- Open System
 - Establishment of energy network in Northeast Asia
 - Encouragement of energy cooperation between South and North Korea

Energy and Economic Growth

| Item | 1981 | 1990 | 1995 | 2000 | 2002 | Growth rate (%) | |
|--|-------|-------|-------|-------|-------|-----------------|---------|
| | | | | | | '81-'90 | '90-'00 |
| Primary Energy Consumption (M TOE) | 45.7 | 93.2 | 150.4 | 192.9 | 208.6 | 8.2 | 7.5 |
| Per Capita Energy Consumption (TOE) | 1.18 | 2.17 | 3.34 | 4.08 | 4.38 | 7.0 | 6.5 |
| Energy/GDP (TOE/'95 M Won) | 0.37 | 0.35 | 0.40 | 0.40 | 0.40 | -0.6 | 1.4 |
| GDP ('95 T Won) | 122.4 | 263.4 | 377.4 | 476.3 | 521.5 | 8.9 | 6.1 |
| Population (M) | 38.7 | 42.9 | 45.1 | 47.3 | 47.6 | 1.2 | 1.0 |

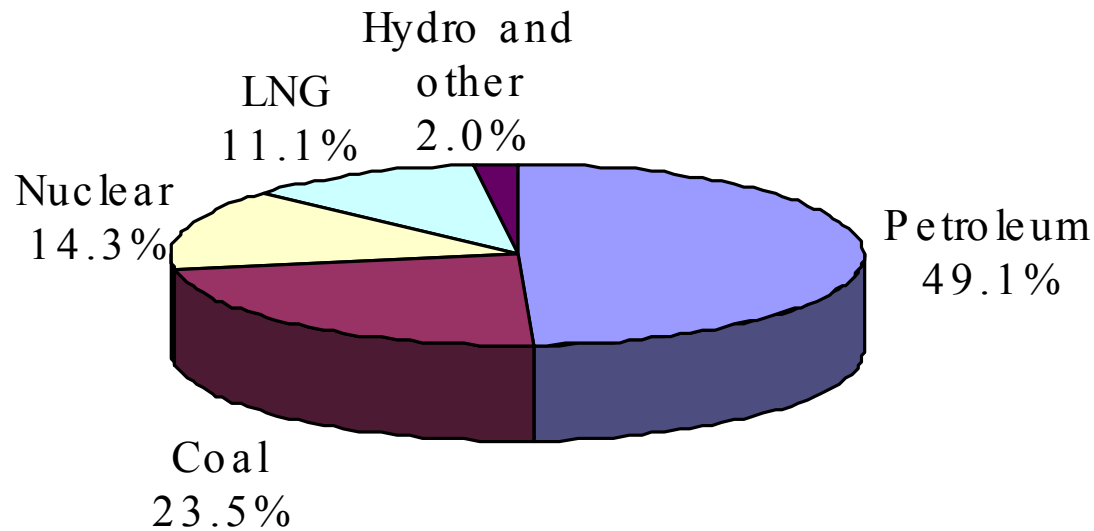
Energy Consumption and Economic Growth



Prospect on Energy & Economic Growth

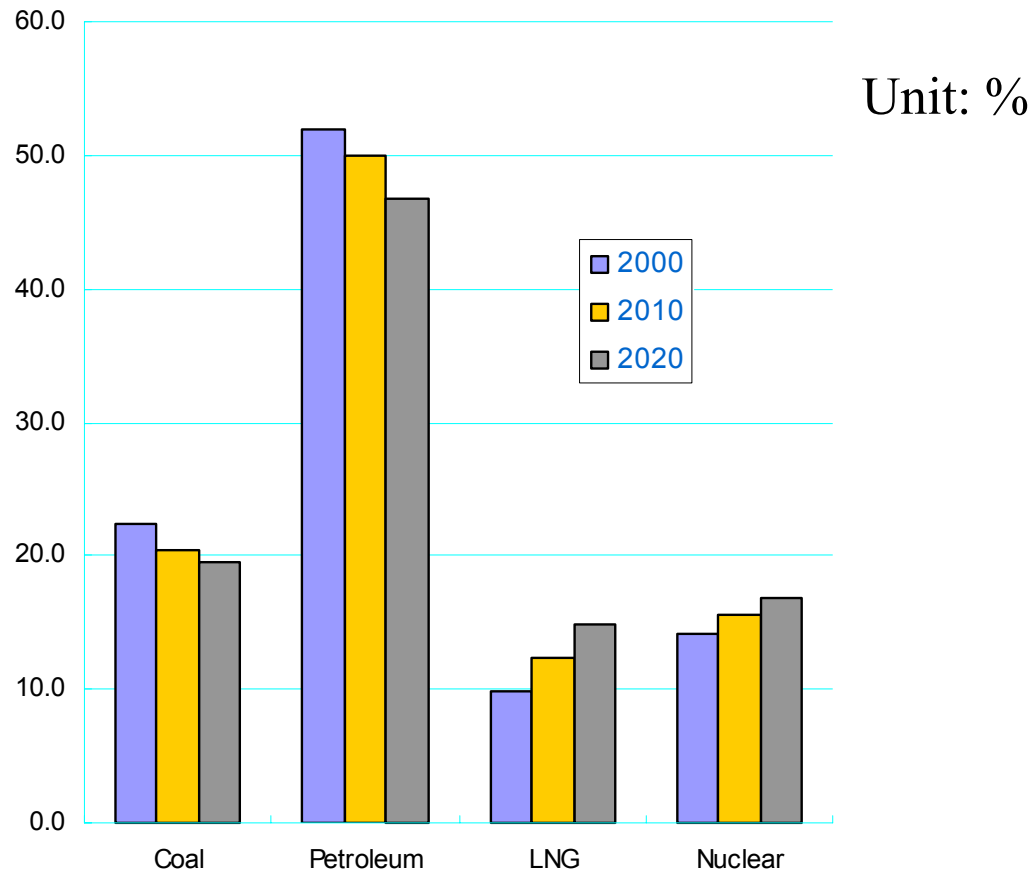
| Item | 2005 | 2010 | 2015 | 2020 | Growth rate (%) | |
|-----------------------------------|-------|-------|-------|---------|-----------------|---------|
| | | | | | '00-'10 | '10-'20 |
| Primary Energy Demand (M TOE) | 230.9 | 263.6 | 288.2 | 311.8 | 3.2 | 1.7 |
| Per Capita Energy Demand (TOE) | 4.77 | 5.31 | 5.72 | 6.16 | 2.6 | 1.5 |
| Energy/GDP (TOE/'95 M Won) | 0.38 | 0.34 | 0.30 | 0.27 | -1.8 | -2.3 |
| Energy/GDP Elasticity | 0.72 | 0.53 | 0.39 | 0.43 | 0.62 | 0.42 |
| GDP ('95 T Won) | 611.0 | 783.1 | 975.9 | 1,170.3 | 5.1 | 4.1 |
| Population (M) | 48.5 | 49.6 | 50.4 | 50.7 | 0.5 | 0.2 |

Energy Consumption by Source (2002)

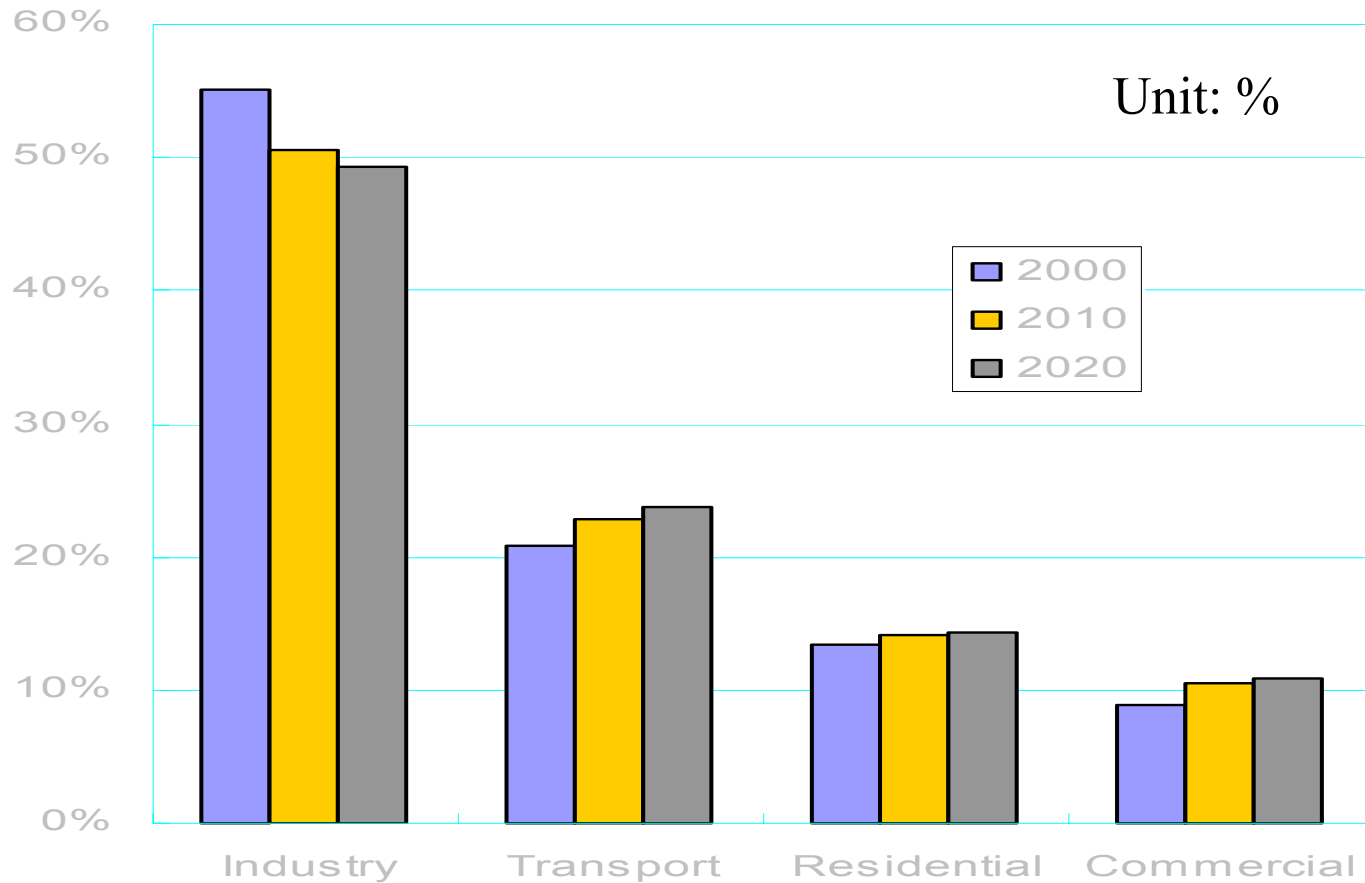


Total energy consumption: 208.6 M TOE

Energy Outlook: Energy Demand by Fuel



Energy Outlook: Energy Demand by Sector



Overseas Dependency of Energy Imports

| | '80 | '90 | '00 | '01 | '02 |
|------------------------------|------|------|------|------|------|
| Overseas Dependency (%) | 73.5 | 87.9 | 97.2 | 97.3 | 97.1 |
| Dependency on MEA Oil (%) | 98.8 | 73.7 | 76.8 | 76.9 | 73.3 |

Measure for Energy Security

- Traditional measures
 - Government intervention on energy imports and domestic supplies
 - Diversifying energy fuels and import sources
 - Encouraging energy developments in abroad
 - Oil stockpiling
 - Energy conservation
- New measures
 - Enforcing market force rather than government control
 - Continuously increasing oil stocks
 - Enhancing international/regional energy cooperation

Prospect on CO₂ Emission

| | 2001 | 2006 | 2011 | 2015 | 2020 |
|--------------------------------------|-------|-------|-------|-------|-------|
| CO ₂ Emission (M TC) | 123.3 | 147.8 | 162.9 | 171.5 | 184.7 |
| CO ₂ /GDP (TC/ '95 M Won) | 0.25 | 0.23 | 0.20 | 0.18 | 0.16 |
| Per Capita Emission (TC) | 2.60 | 3.03 | 3.27 | 3.41 | 3.65 |
| CO ₂ /Energy (TC/TOE) | 0.62 | 0.62 | 0.60 | 0.59 | 0.59 |

Measure for Environmental Security

- Energy efficiency
- Enlarging renewable energy

Prospect on Renewable Energy

| | 2001 | 2006 | 2011 |
|--------------------------------|--------------|--------------|--------------|
| M TOE (% over total energy) | 2.5 (1.2) | 4.0 (1.7) | 5.8 (2.2) |

Regional Energy Cooperation

- ROK shows official interest in regional initiatives for sharing energy resources, according to its Energy Vision 2010.
- KEEI has a more concrete project on this issues.

National Concern in Energy Security

- Siting problems, in particular, for new nuclear power plants as well as nuclear radioactive wastes