Energy and Environment Strategy of Korea to Address Global Climate Change

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Past and Present View of Seoul

'90s

2010
Triangle Efforts

**Government**
- $40 Bil.
  - Adaptation of Tight Environmental Regulations
  - Provision of Subsidies & Incentives

**Fuel Industries**
- $20 Bil.
  - Upgrading of Refinery
  - Desulfurization

**Auto Industries**
- $30 Bil.
  - High Engine Efficiency
  - Emission Control
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Introduction
Energy Consumption Composition by Sources

- **Natural Gas**: 0.4%
- **Oil**: 43%
- **Coal**: 28%
- **Nuclear Energy**: 14%
- **Renewables & Etc.**: 15%

- 135 Mil. t (2.0% of World)
- 103 Mil. t (2.3 Mil. bbl/day) (2.6% of World)
- 27 Mil. t (1.3% of World)
GDP by Industrial Sectors (832 bill. $, 2009)

- Service: 57.2%
- Manufacture: 27.8%
- Construction: 9.1%
- Agriculture & Fishery: 3.2%
- Mining: 0.4%
- Electricity, Gas, Water supply: 2.3%
Korean Power Generation Status by Sources

- Nuclear: 43.0%
- Coal: 36.0%
- LNG: 14.0%
- Oil: 5.0%
- Water: 2.0%
- Wind: (0.034%)
- Solar: (0.003%)

Average Power Generation unit cost: 5.7 cents /kWh
Environmental Policies in Korea
Environmental Policy

Green Growth Paradigm

Environment (Low Carbon)

Improving environment through economic growth

Low Carbon, Green Growth

Economy (Growth)

Environmental improvement as a precursor for further economic growth

“Synergy maximization between environment and economy”
Green Growth Strategy in Korea

The World 7th Green Power by ’20 and the 5th by ’50
: A role-model as a green growth leader

’09~’13, Total $ 90 bil. Investment
(2% of Annual GDP)

Mitigation of climate change & energy independence
Creating new engines for economic growth
Improvement in quality of life and enhanced international standing
Environmental Policy

- **Fuel Quality Control**
  - Limits on sulfur content in transport fuel ('81)
    - Diesel: 0.4% → 0.1% ('96), B-C: 1.6% → 0.3% ('02)

- **Vehicle Standard**
  - Enforcement of euro standard
  - Tightening of fuel efficiency and GHG emission standard
    - ’12~’14: over 17km/l, less than 140g/km

- **Green Car**
  - Incentives for natural gas bus ('00)
    - ’12: 28,000 cars are scheduled to be supplied
  - Subsidies for low carbon vehicle
    - CNG bus

- Metropolitan Area Clean Air Act ('03)
Reorganization of Energy Industries
Reorganization of Energy Industries

The Energy Challenge

- New & Renewable Energy
- Clean Coal Technology

Energy Diversity

“Technology”

- Utilization of CO2

Low CO2

Abundant

Energy Efficiency

- Energy Storage Device
- Energy Savings

Affordable

Clean

Criteria
Reorganization of Energy Industries

- Consistent effort to decrease sulfur content
- Compliance with the government’s “Quality Grade Policy”
- Investment in NOx and VOC control & odor prevention facilities

* DPF: Diesel particulate filter, a particulate matter removal device for diesel vehicles
Reorganization of Energy Industries

Fuel Products, Sulfur Content

(wt ppm)

Korea('06)  Korea('09)  Korea('10)  EU/JPN

30  10  4  10

50  10  3.2  10

94 %↓  87 %↓

Diesel  Gasoline
Summary

Under the national Green Growth Strategy, Korea will strive equally to foster its economic growth and also to address concerns over climate change with world trend from pollution control, eco-efficiency, up to eco-effectiveness.


Conclusively, sustainable low carbon, green growth will require an international collaboration from government and private sector.
THANK YOU!