

Low Carbon Green Growth Vision and National Strategy of Korea

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I . Korea's Strategy to Climate Change

Declaration of Green Growth Vision

Envisioning the next 60 years (announcement of a new national vision in the 60th anniversary of the founding of the Republic on August 15th, 2008)

Last 60 years

Economic growth



Next 60 years

Green growth



More than just a development strategy

- Changing people's behavior and way of thinking
- Creating a new civilization



Background of Green Growth

Climate Impact


- Average temperature rise 1.7°C (almost 2 times higher than world average)

Energy security vulnerability

- 140 billion USD energy bill to import energy(2008)

Economic slow-down

- Growth rate declining since the Asian economic crisis in late 1990s
- Growth without rise in employment



“New vision
is needed”

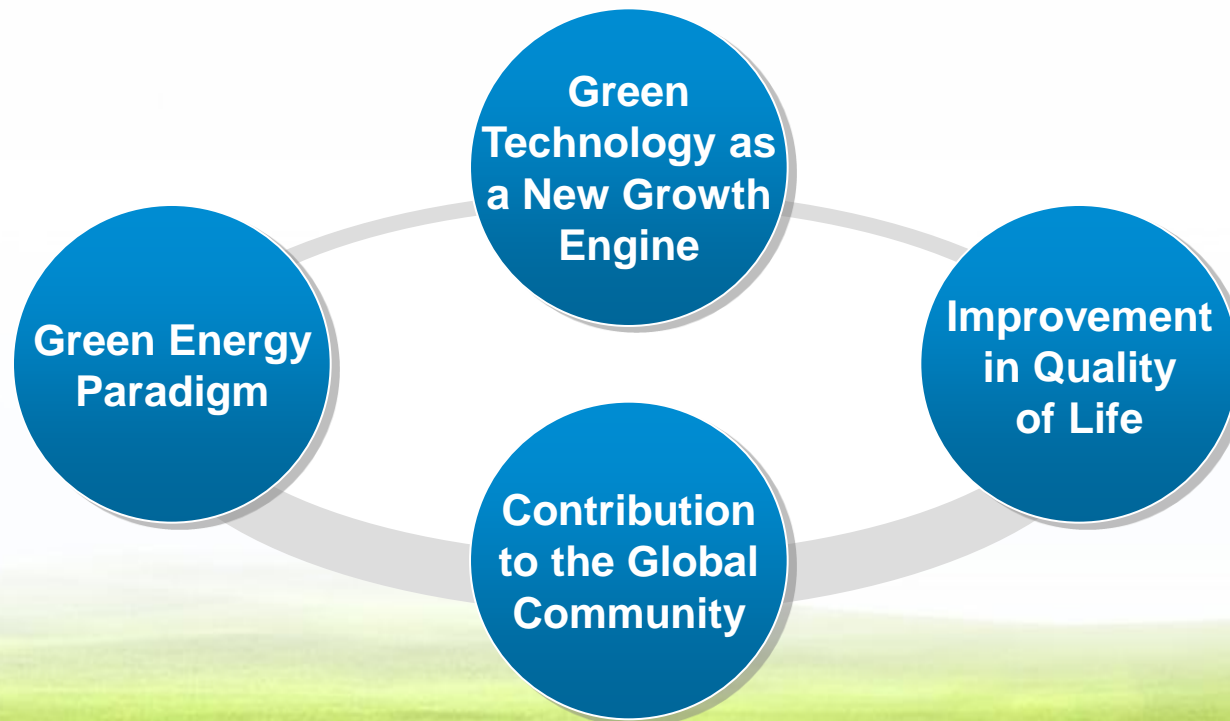


Green Growth, Turning Crises into Opportunity

What do we mean by Green Growth?

“As we go green - we generate money & jobs”

<Elements of Green Growth>



Turning Vision into Real Actions

(1) Establish the Presidential Committee on Green Growth (Feb, '09)

(2) Enact of the Framework Act on Low-carbon Green Growth (Dec. '09)

(3) Formulate the National strategy and implementation plan (June, '09)

(4) Set up the National midterm reduction target (Nov, '09)

(5) Establish the GHG Inventory & Research Center of Korea (July, '10)



Overview

- Established under the direct control of the President
- Manage the national agenda of 'Low-Carbon, Green Growth'



Tasks

- Coordinate and review low carbon green growth policies
- Setup action plans and policy measures for green growth



Milestones

- Dec. 2008 Preparatory TFT organized
- Feb. 2009 1st PCGG meeting (6 meetings has been held)
- Feb. 2009 Government draft of 「Framework Act on Low Carbon Green Growth」 finalized
- Jul. 2009 Five-Year National Plan for Green Growth finalized
- Dec. 2009 「Framework Act on Low Carbon Green Growth」 passed by the National Assembly

Framework Act on Low Carbon Green Growth

- Enact the Framework Act on Green Growth
 - * effective as of April 14th, 2010
- Has priority over all relevant laws regarding Green Growth

Key Provisions

- 1) Legal grounds for the **Presidential Committee on Green Growth**
- 2) Mandates the government to **foster and support green economy, green industry**
- 3) Foster **financing for green technology R&D and green investments**, as well as, mandates the promotion of **environment-friendly tax reform**
- 4) Mandates government to set concrete **targets for GHG emission reductions**
- 5) Mandates for mandatory **reporting of GHG emissions and setting targets for GHG mitigation and energy saving** of large-scale entities
- 6) Establish National integrated GHG information management system ; **Greenhouse Gas Inventory & Research Center of Korea**
- 7) Provides the legal framework to introduce a **cap & trade system** in Korea
- 8) Articles on environment-friendly **land use, green building, low carbon transportation, green consumption and production**, and other issues related to sustainable development

National Strategy and 5-Year Implementation Plan

- Inherits the spirit of the “Economic Development Plan” in the past

Mitigation of Climate Change & Energy Independence

1. Effective reduction of GHG emissions
2. Reduction of the use of fossil fuels and the enhancement of energy independence
3. Strengthening the capacity to adapt to climate change

Creation of New Engines for Economic Growth

4. R&D of Green Technology
5. The “greening” of existing industries and promotion of green industries
6. Advancement of industrial structure
7. Establishing a structural foundation for the green economy

Improvement in Quality of Life & Enhancement of Korea's International Standing

8. Greening the national territory and updating transportation infrastructure
9. Bringing the green revolution into people's daily lives
10. Becoming a role-model of Green Growth for the international community

3 Policy Objectives & 10 Key Policy Items

National Strategy and 5-Year Implementation Plan: Green Budget

- A total of 107 Trillion KRW will be invested between 2009-2013
 - Invest annually about 2% Korea's GDP

* 2008-2012 National Financial Management Plan: R&D 10.7, SOC 7.3, Environment 3.7, Total Budget 6.2%

	Sub-Total	2009	2010~2011	2012~2013	Increase Rate
Invest Amount Total (Unit: Trillion KRW)	107.4	17. 5	48. 3	41. 5	10.2%

Mitigating Climate Change &
Increasing Energy Independency

56.9

14.0%

Creating New Growth Engine

28.6

9.4%

Enriching Quality of Life &
Improving Korea's Global Status

27.9

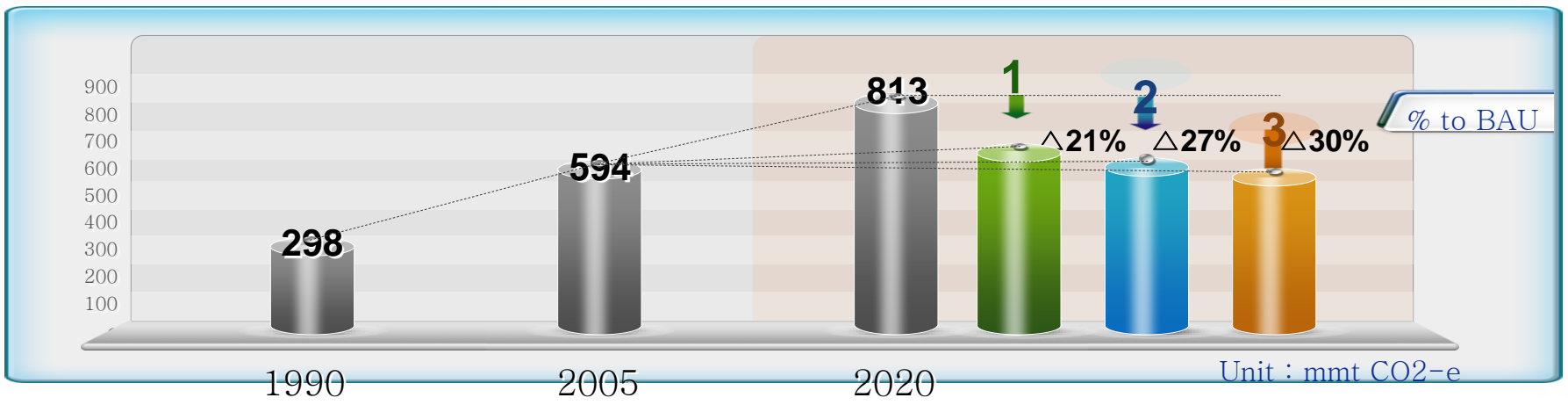
3.6%

* Investment Amount Total is exclusion of overlapping areas of investments among 10 policies (Operations) totalled.

Voluntary National Mid-term Reduction Target



- President Lee promised at Toyako G8 summit that Korea would announce a GHG mid-term reduction target by 2009
- Korea government unveiled 3 scenarios of GHG reduction target on August 2009



Scenario	Goal	Criteria	Exemplary Mitigation Options
1	BAU Δ 21%	Cost Effective Policy and Technology	<ul style="list-style-type: none"> Promotion of Green Homes, Green Buildings Shift to Low Carbon – Highly Efficient Transportation System Innovation of Manufacturing Processes into Green Processes Promotion of Renewables and Nuclear Power
2	BAU Δ 27%	Mitigation Costs up to \$50/tCO ₂ -e	<ul style="list-style-type: none"> Destruction of F-Gases Promotion of Hybrid Cars Application of CCS in Power Plants
3	BAU Δ 30%	Upper Bound of Reductions Range by EU	<ul style="list-style-type: none"> Introduction of Electric and Fuel Cell Vehicles State of the Art Efficiency Technology and Equipment in Households

Voluntary National Mid-term Reduction Target

Decision made on mid-term GHG reduction Target by 2020, at Presidential Cabinet Meeting: to cut GHG Emissions by 30% from BAU (17 Nov 2009)



Decision Made for the Larger National Interest (Historic Cabinet Meeting)

Removing Trade Barriers, Enhancing Energy Security, Preoccupying Global Green Markets

Transformation to Green Lifestyle with Concerted Efforts Among Citizens, Firms and Governments

Creating More Conducive Atmosphere for all Countries' Active Participation

Follow up measures

- Establish an independent and permanent research center
- Setting sectoral reduction and implementation plan

2010 Policy Directions

Key Policy

Creating Substantial Performance immersed in “Run-Mode”

Policy Directions

1

Promote Green Growth to engage ALL citizens

2

Exert efforts to create Green Growth

3

Prepare to host G20 summit

7 Practical Issues

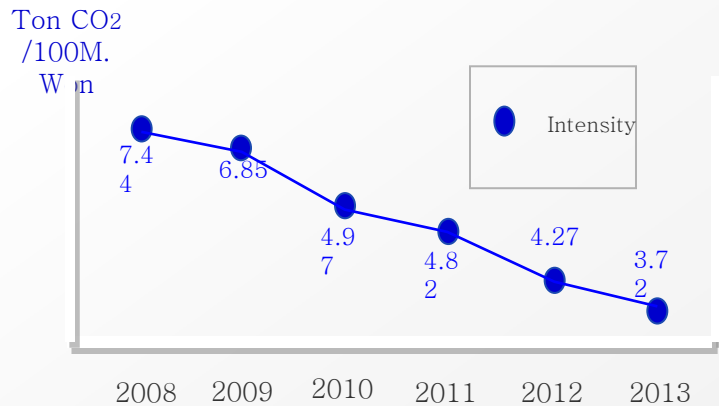
- 1 Establish how to meet national greenhouse gas reduction goals
- 2 Grow 10 core green technologies as drivers &
- 3 Promote excellence in green technology entrepreneurship promote green entrepreneurship
- 4 “Greening” of industries, including energy efficiency focus
- 5 Rationalization of energy prices and eco-friendly tax reform
- 6 ‘Me First’ Green Living (Energy saving, reduce food waste, etc.)
- 7 Global Cooperation for Green Growth

GHG Reductions In Progress: Case 1



50% Reduction of TCO2/100Million Won by 2013 from 2008 Level

Projection of TCO2/100Million Won



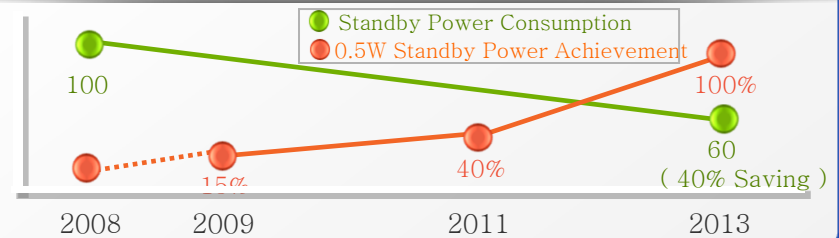
Products: 40% Energy Saving

• Top-Level Energy Efficient Products to the Markets in the World

- 0.5W Stand-by Power : All Products Below 1W in 2009, Below 0.5W in 2013

- Saving in Use : 40% Efficiency Improvement

Energy Efficiency of Products



Environment Friendly Products



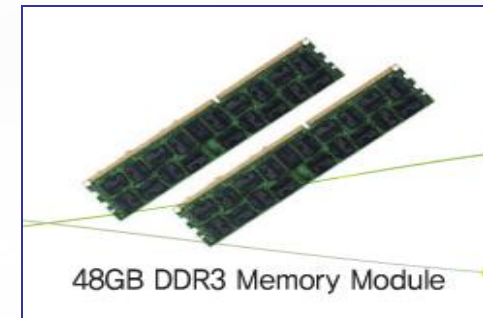
[LED TV]

- 43% Energy Saving(183W → 105W)



[Blue-Earth Mobile Phone]

- Photovoltaic Panel Equipped



48GB DDR3 Memory Module

[DDR 3]

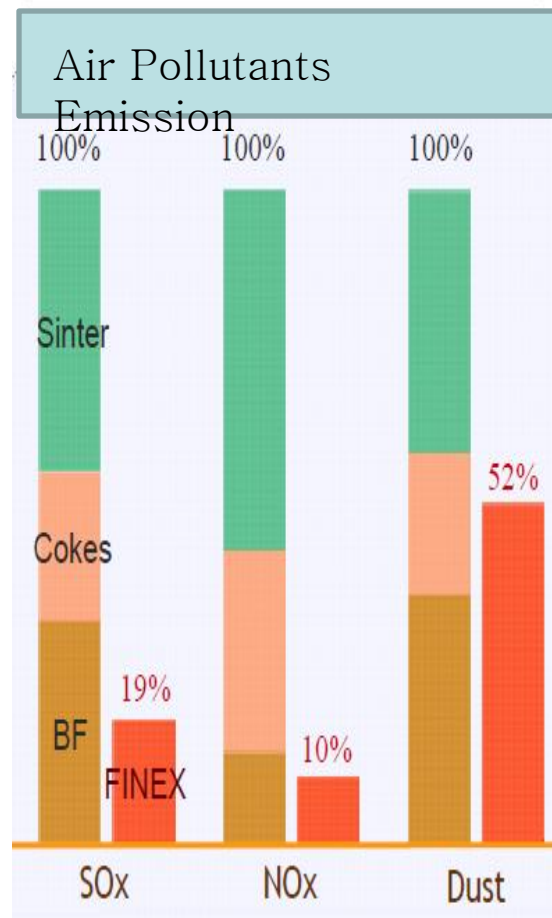
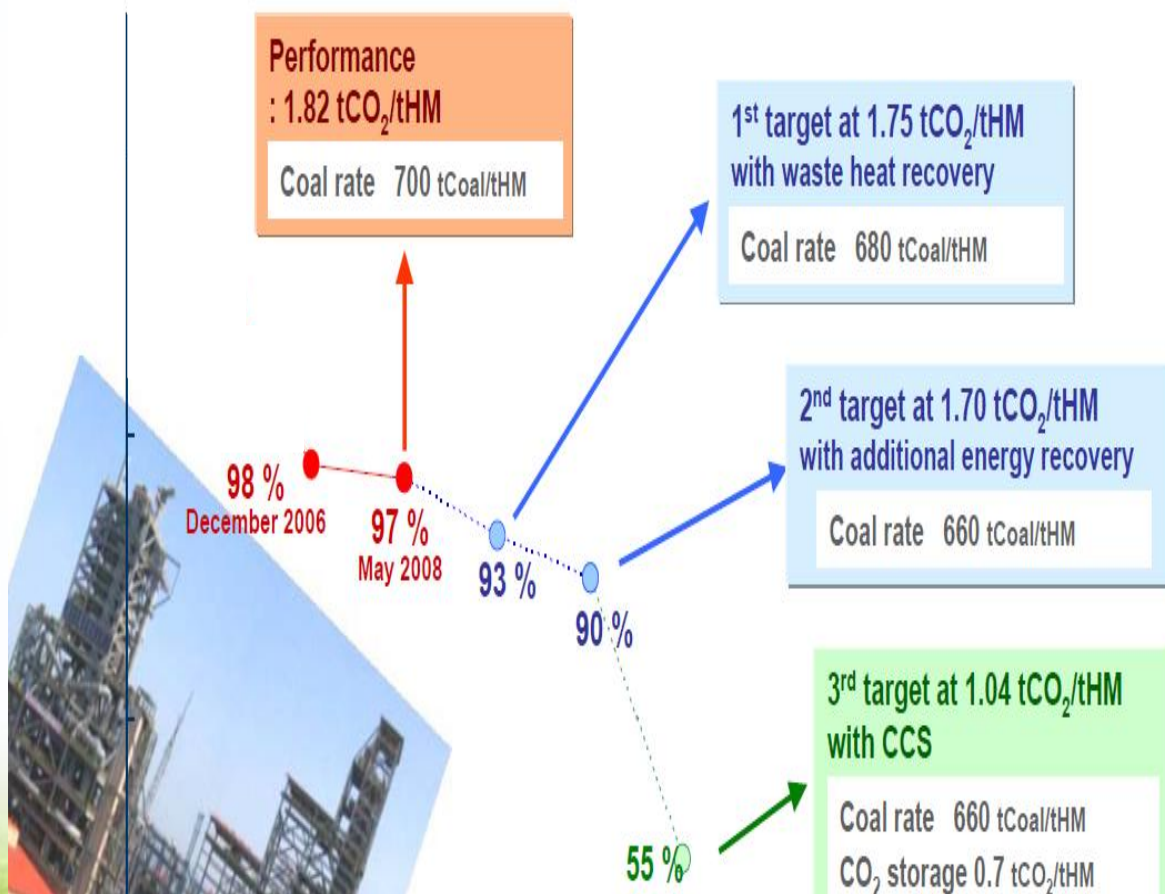
- 73%Energy Saving (2,564 kWh Saving]

GHG Reductions In Progress: Case 2

◆ POSCO Reduces CO₂ and Air Pollutants(NO_x 90%) with FINEX

Specific amount of CO₂ emissions per ton of hot metal

* Relative index based on world BF average, 1.88 tCO₂/tHM at 100%



GHG Reductions In Progress: Case 3



- Carbon Management with Lifecycle Assessment

- HMC's Vision to Improve Average Fuel Efficiency by 50%

Parts

Green Partnership

Manufacturing

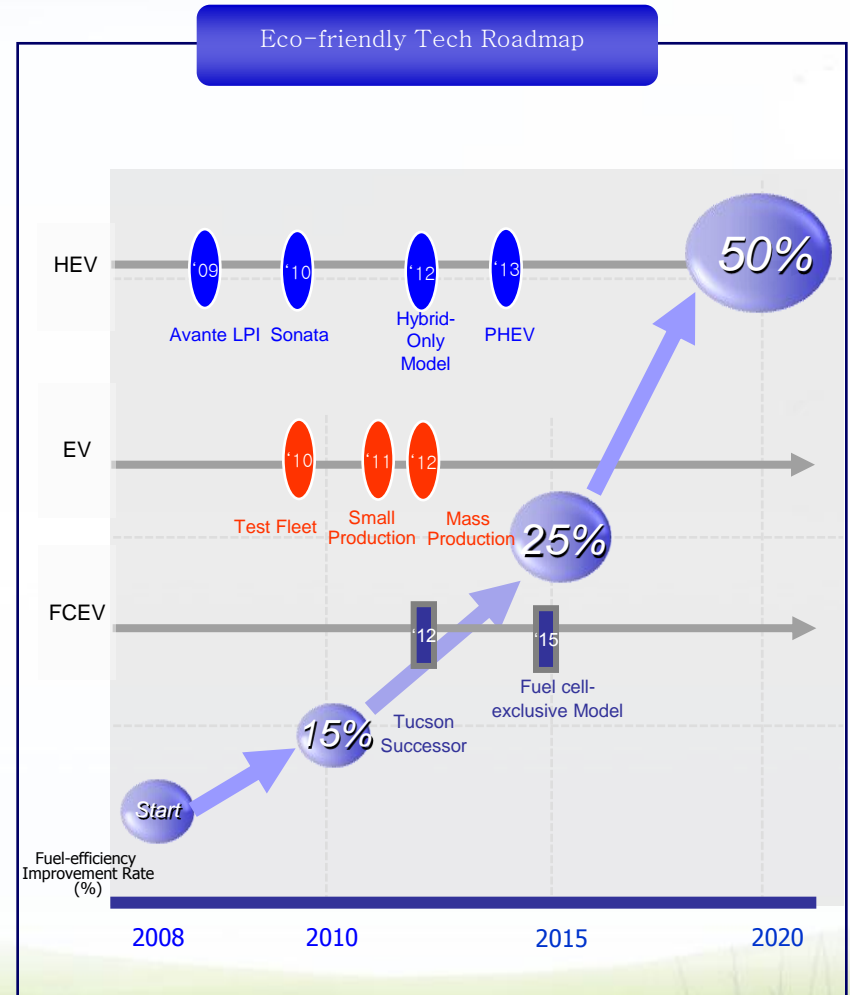
Low Carbon Green Plant

Product

blue drive

Disposal

Recycling



Background and Status

- Establish an **Independent and Permanent** research center that can strengthen the foundation and improve the overall framework to achieve national reduction target successfully (June 15th, 2010)

Background

- Aftermath of setting up national reduction target
- Framework Act on Low Carbon Green Growth

Affiliation and Legal Status

- Affiliate of: Ministry of Environment
- Legal Status : Comprehensive entity to analyze and evaluate GHG emissions

While independent from a variety of stakeholders, GIR collects GHG related information, sets reduction targets and evaluates implementation.

(5) GHG Inventory & Research Center of Korea

Vision

To Act as a Global Think Tank for GHG Reduction, in Support of Low Carbon Green Growth



Goals

1 Information Hub

Comprehensive and effective management of GHG inventory data

2 Excellerating Green Growth

Accelerating Green Growth through GHG reduction activities

3 Global Networking and Outreach

Enhancement of a cooperative network for GHG reduction

5 Priority Areas

Establish a nationally Integrated GHG information management system

Support GHG inventory and energy management by object

Support setting national and sectoral GHG emission reduction targets

Research and analyze GHG reduction within nation and beyond

Enhance global cooperation for green growth

II. Building a Global Climate Cooperation Strategy

Why is Global Climate Partnership Important ?

Climate Change affects the entire global environment & economy & community

- Global community is needed to make efforts together and cooperate to develop green technologies and industries in mitigating climate change

Annex 1 and Non-Annex 1 Countries

- need for each country to take a role appropriate to its national context
- Developed countries' active GHG reduction efforts and developing countries' support,
- developing countries should each actively pursue strategies for real reductions

Korea is Actively Working as a Bridge

July 2008, G8 Extended Summit Meeting (Toyako, Japan)

- Supported the Shared Vision(to control global temperature rise within 2 degrees by the end of this century)
- Announced the launching of **the East-Asia Climate Partnership**
- Proposed to set the national midterm GHG reduction target in 2009

July 2009, G8 Extended Summit Meeting (Italy)

- Took leadership in developing Smart Grid technology:
Identifying barriers and finding strategies to make future technology a reality
- ※ 10 areas of transformational technologies(energy efficiency, solar energy, etc.) selected.

December 2009, COP15(Copenhagen, Denmark)

- Emphasized the spirit of “Me First”
- Declared midterm GHG reduction target (30% of BAU)
- Announced the proposed establishment of the **“Global Green Growth Institute(GGGI)”**

Key Activities In Progress

East Asia Climate Partnership

- To help Developing Countries in East Asia address climate change
- To create win-win synergy between the climate change and the economy in East Asia
- To emphasize the need for new resources for global climate action
- 200 million USD for 5 years (2008-2012)



Sharing Knowledge & Building a Global Network

- First steering group meeting of “Forum of Experts Analyzing GHG Reductions” in late 2010
- Workshop with major countries, institutions, and experts participation
- National experts workshop, hosted with UNFCCC in October

Active Participation in Post-2012 Climate Conference

- AWG meeting and COP 16 in December(Mexico)
- Working as a bridge between Developed and Developing Countries to achieve NAMA registry application

Strengthen Global Cooperation Network on Green Growth Strategy

- G20 Summit meeting in November(Seoul)

Future Work and Suggestions

Establish a cooperative network for climate experts in Developing Countries

- Organize forum of experts Analyzing GHG Reduction from developing countries

Members	-Experts Forum in Developing Countries such as China, India, Malaysia (including experts in Developed Countries and international organizations)
Secretariat	- Korea(GIR)
Operational Entities	- Steering Group (gov't representatives+ experts) - Expertise Committee
Operation	- Steering Group meeting every two years - Host a forum every year
Obligation	- Joint Projects by experts (developing and operating a model, analysis of scenario, DB sharing, etc.)

- Capacity building to analyze GHG reduction potential, in developing countries
- Develop training curriculum, etc.

Implement global climate expert networking

- Bilateral expert network
 - Major countries(Australia, England, etc.)
 - International institutes(**IIASA**, etc.)
- Mutual personnel exchange, short-term training program
- **Joint Projects for exchange of experiences**
- Regular consultation by experts



Measures against climate change needs to be a global endeavor`

- Establish a system to maximize synergies, connecting reduction activities between Developed and Developing Countries

Share know-how and methodology in reduction analysis and building policy options with one another

- especially with Developing and Newly Industrialized Countries

Building a global cooperation network to share strategy on capacity building of developing countries and Green Growth

- Initiation : “International Conference on Post-Kyoto Climate Change Mitigation Modeling”
- The sprit of “Me First” and partnership

THANK YOU FOR YOUR ATTENTION