

# **Green Technology: A Basis for Low Carbon Green Growth Paradigm for Korea**

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# I. New Vision for Korea

Announcement by President Lee Myung-bak  
August 15, 2008

Excerpt:

“Today, on the occasion of the **60th anniversary of the founding of the Republic of Korea**, I want to put forward **“Low Carbon Green Growth”** as the core of the **Republic’s new vision**.

Green growth refers to **sustainable growth that mitigates greenhouse gas emissions and prevents environmental degradation**. It is also a **new national development paradigm that creates new growth engines and jobs through green technology and clean energy.**”



# Economic Growth of Korea in Last 60 Years

Year	1946	2006
Population	23million	49 million
Per capita GNP	\$ 67	\$ 16,291
GDP	\$ 1.4 Bil	\$ 925 Bil
Vol. of Trade	\$ 32 Mil	> \$ 500 Bil
No. of Businesses (Total Employment)	8,628 (211,220)	122,622 (2,997,826)

# The Past and Present of Korea (1950's & 2000's)





# Vision for Creating New 60 years



Last 60 years

Economic growth



Next 60 years

Green growth



**More than just an environmental policy**

- a new paradigm of progress
- changing people's behavior and way of thinking
- Green Growth is not an option, it is the only choice for Korea

**"Low Carbon Green Growth"**

# Establishment of the Presidential Committee on Green Growth



## Overview

- Established under the direct control of the President on January 5<sup>th</sup> 2009
- **Implement the national project of 'Low-Carbon Green Growth'**



## Tasks

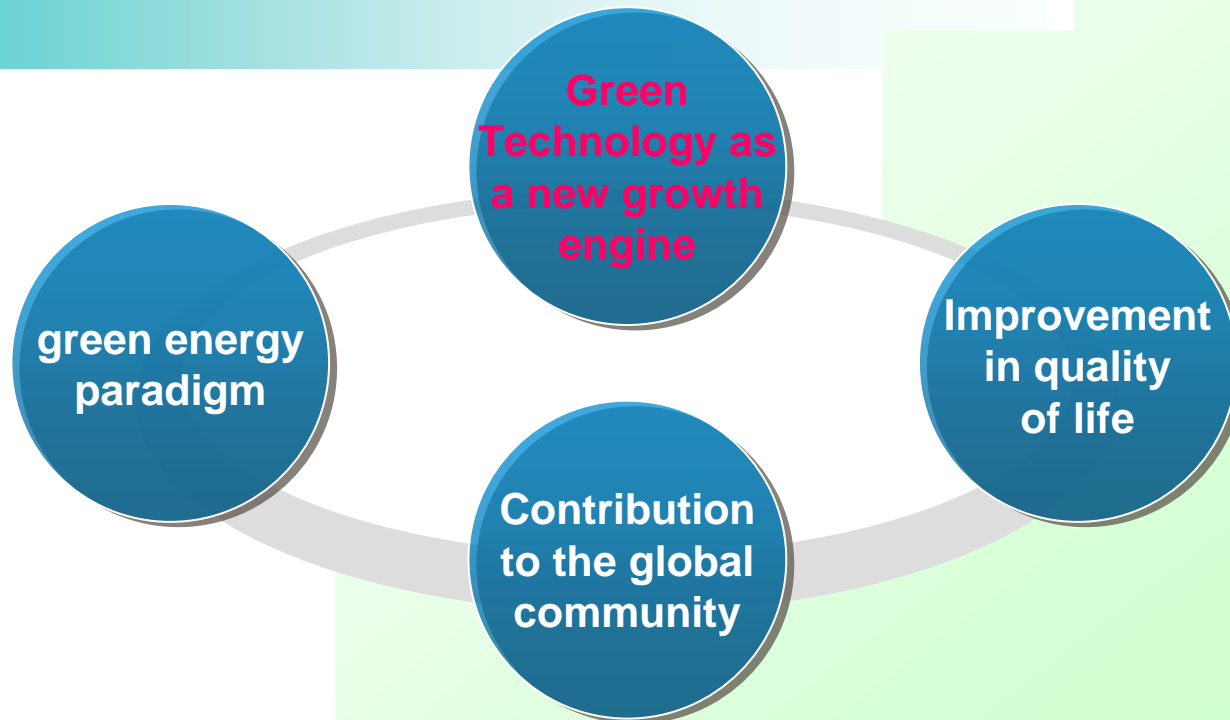
- **Coordinate and review low carbon green growth policies**
- **Setup action plans and policy measures for green growth**

## Milestones



- **Feb. 2009 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**
- **Apr. 2010 「Framework Act on Low Carbon Green Growth」 enacted**

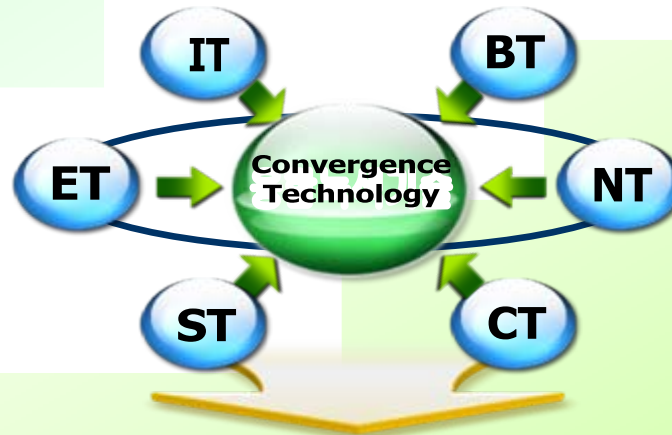
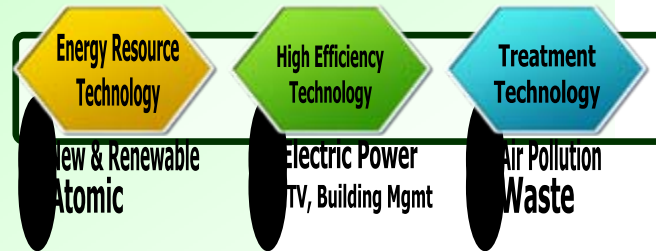
## Elements of Green Growth





# II. Green Technology Concept

## Traditional Green Technology



Overcome Existing Tech

Create New Technologies

## – Current Status of Green Technology of Korea

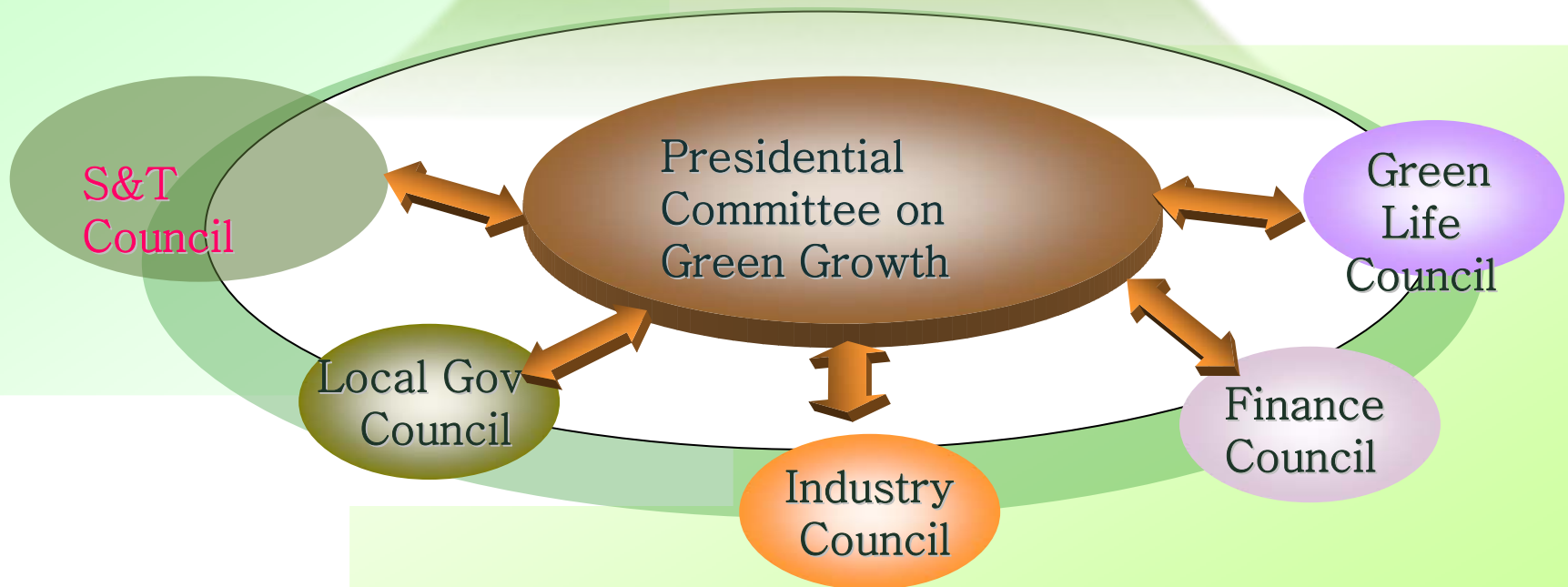
- **Level of Green Technology – 50 ~ 70% of advanced countries**
- **World market occupancy – 1.4 % of major green energy market**
- **Green competitiveness index – 11<sup>th</sup> out of 15 major countries (1<sup>st</sup> – Japan, 7<sup>th</sup> – U.S.A.)**
- **Amount of investment – US \$600 million (2007)**

## – Goals

- **Level of Green Technology – 80% ('12), 90% ('20) of advanced countries**
- **Creation of job positions – over 160,000 ('12)**
- **World market occupancy – over 7% ('12), over 10% ('20)**
- **Environmental sustainability index – 20<sup>th</sup> ('12), 10<sup>th</sup> ('20)**

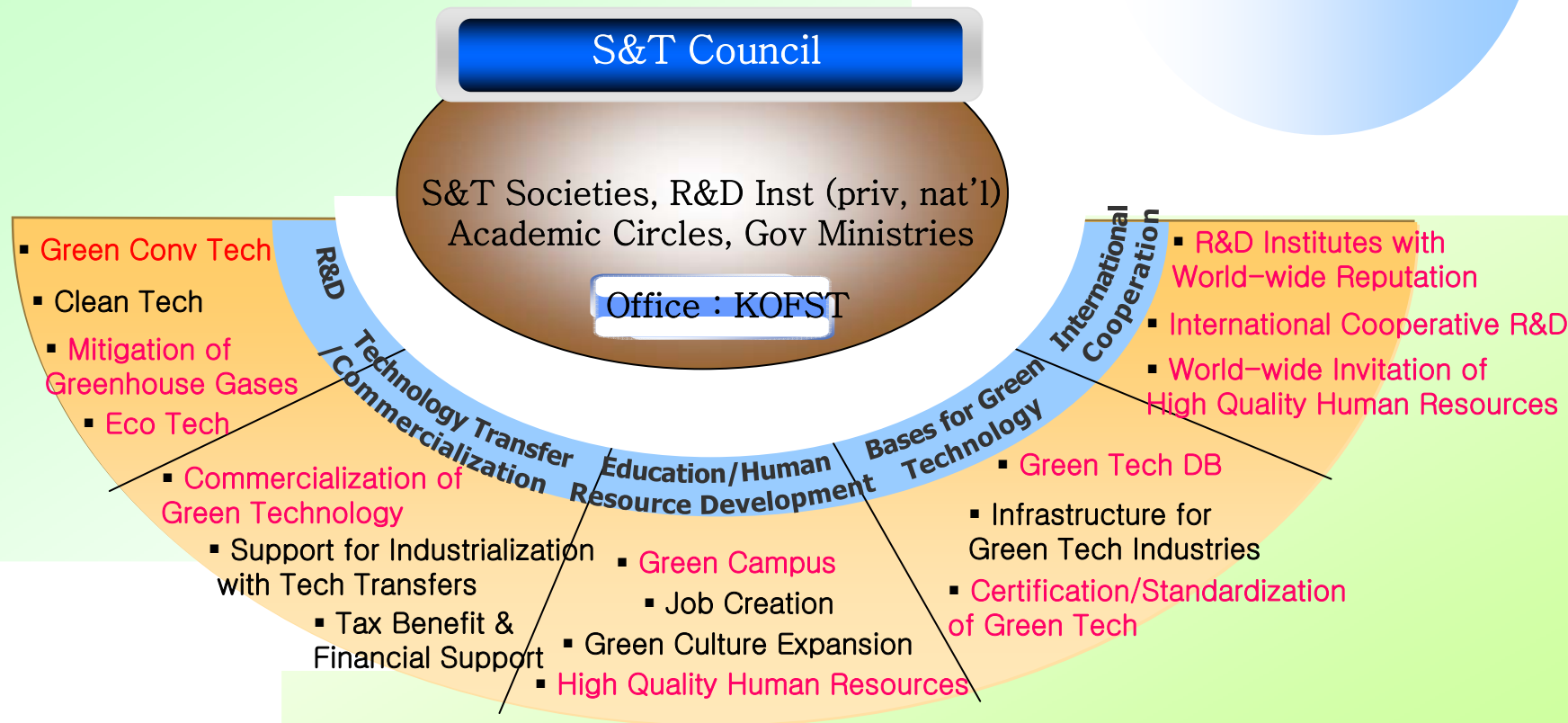
# Efforts for Successful Implementation of Green Growth

Harmonizing Every Sector of Society  
for Green Growth

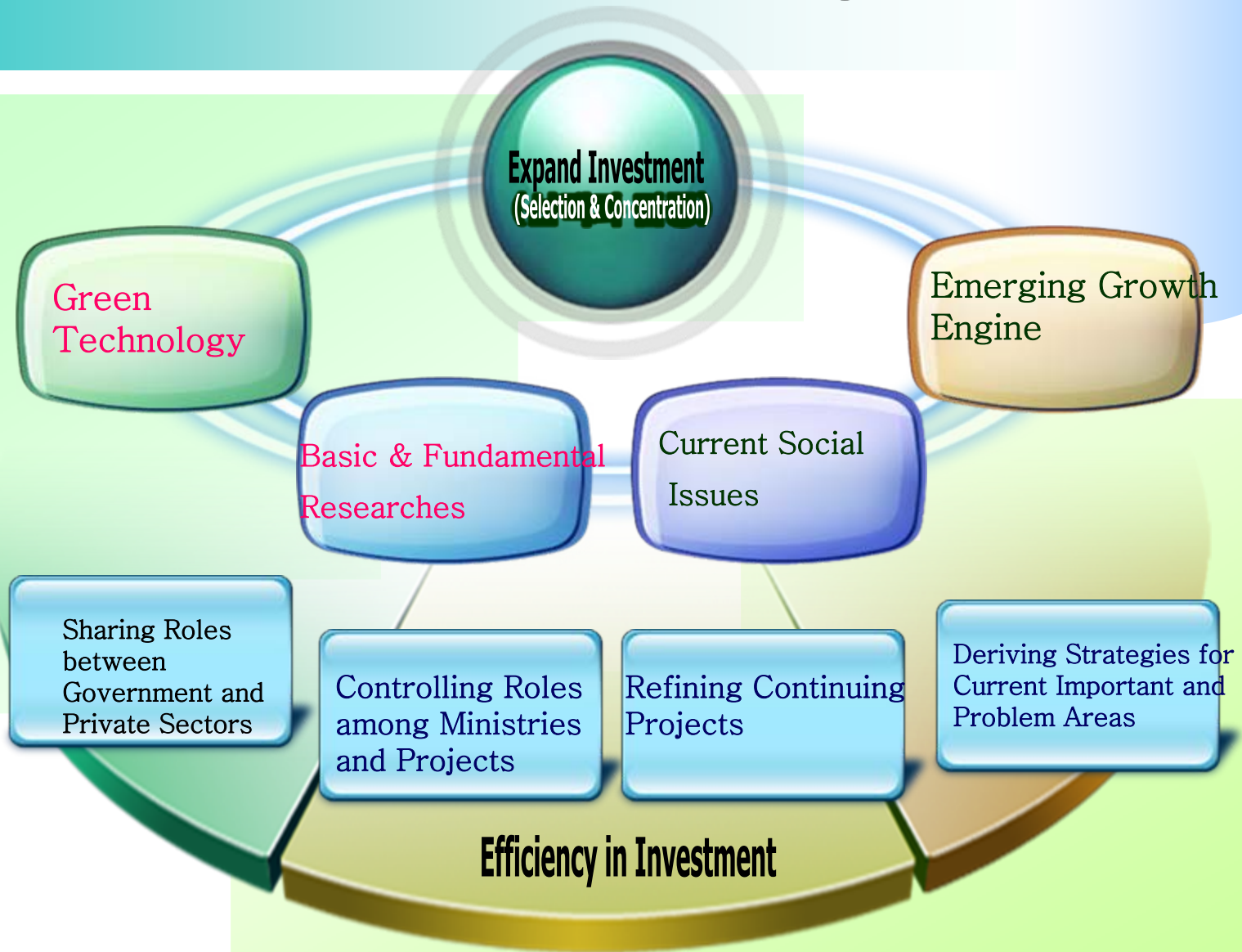


# Establishment of S&T Council for Green Technology

## Council & Specialist Groups



# Basic Direction on National Budget Distribution





## - **R&D Budget on Green Technology**

- **Total of 27 Major technologies consisting of over 50 R&D projects**
- **Total investment in 2008 - 1.0 trillion won (approx. \$.87 billion)**
- **Budget for 2009 – 1.2 trillion won (\$1.04 billion)**
- **Emphasis in 2010 – new & renewable energy, energy resources, nuclear energy, intelligent transportation system, u-city, Smart Grid, ocean environment, advanced contents using convergence technology, etc.**
- **Budget for 2010 – 1.4 trillion won (\$1.22 billion)**

## III. Government Plan

### Strong Green Leadership

- **Strong drive from the top leadership**

### Fast integration of the Vision in all sectors

- **Partnership with private council (business, financial sector, technology experts etc.)**

### Strong industrial base in relevant areas

- **large competent players**

### Turning the vision into Reality “real actions”

- **Setting up Green Budget of 2 % of GDP to enable real actions**

## Sustainable Drive key role for the Presidential Committee

### Legal Framework

early ratification of  
the **Framework Act on Green Growth**

### Strategy Plan

- inherits the spirit of the “Economic Development Plan” in the 60~80s
  - \* 5 year implementation plans
- new **“green saemauel movement”**

### Green Budget

- Green New Deal
- **Re-orientation of private-public finance toward green** (policy, R&D, SOC)

**National midterm GHG reduction target**  
- set this year -

## Composition

- 7 chapters and 65 articles
- It has priority over all relevant laws regarding Green Growth

## Key provisions

- 1) **legal ground** for the **Presidential Committee on Green Growth** and mandates the committee to **develop a national strategy** for Green Growth.
- 2) mandates the government to **foster and support green economy, green industry, and the transformation of conventional industry.**
- 3) foster **financing for green technology R&D and green investment**, as well as, mandates to promote **environment friendly tax reform.**
- 4) mandates government to set **concrete targets for GHG emission reduction, energy saving, energy security, and renewable energy supply.**
- 5) mandates for mandatory **reporting of GHG emission for businesses.** Provides the legal framework to **introduce cap & trade system** in Korea.
- 6) articles on **environment-friendly land use, green building, low carbon transportation, green consumption and production**, and other issues related to sustainable development.

## Current Status

- a multi-agency + research institute participating project
- strategy and 5 year implementation plan being developed (July 2009)

## Key Framework

### Vision

**A Model Green Nation** - through creating virtuous harmony of environment & economy

### Objectives

**Mitigation of Climate Change & Energy Independence**

**Creating New Engines for Economic Growth**

**Enhanced Quality of Life & Int'l Leadership**

### 10 Key

### Agenda

- Effective Mitigation of GHG Emissions

- Reduction of Fossil Fuels & Enhance Energy Independence

- Strengthening Actions for Climate Change

- Develop Green Tech.
- Foster Green Industry

- Innovate Industrial structure

- Lay Foundation for Green Economy

- Green Transportation & Land, Water Management

- Green Life Revolution

- Global Green Leader

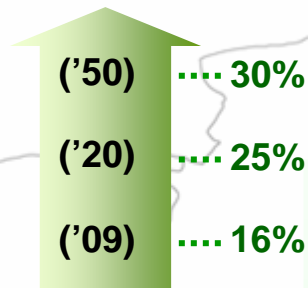


## Strategies

- **Strategic Promotion of Green tech innovation**
- **Strategic Investment in Green R&D**
- **Core Green technologies**
  - LED, CCS, Clean Cars, Renewables, Smart Grid, etc.

## Indicative target

### ● Invest in Green tech R&D



# Setting National Mid-term Reduction Goal(2009.11.17)

**Decision Made on Mid-Term GHG Reductions Goal by 2020 at the Cabinet Meeting: To Cut GHG Emissions by 30% from BAU**



**Cabinet Meeting**

Decision Made for the Bigger 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

## Unilateral and Voluntary Goal

### Announcement of Unilateral and Voluntary Mitigation Goals to Share the Global Mitigation Efforts

- Proactive Participation in Global Efforts Against Climate Change as an Early Mover
- Implementation of the Goals Independent of the Outcome of COP 15 in Copenhagen

### Goal Set at Maximum Level of GHG Mitigation Potential of Korea

- Core Quantitative Target for Low Carbon Green Growth
- Accelerating Transition to Low Carbon Green Growth Economy with Implementation of Ambitious Goal

# 7 Action Tasks of 2010

## Purpose

- 1 For **full-scale implementation of GG policy** following the establishment of legal framework
- 2 To **position Korea as advanced country** by addressing energy-climate crisis
- 3 To **establish Global Korea Model**: leading eco-modernization beyond the success of industrial modernization



# Policy Direction of 2010

Basis

To begin 「Practice Mode」, to create 「Real Achievement」

Direction

1

Green growth with  
all citizens'  
participation

2

Full scale efforts  
to create  
green growth engine

3

Upgrade Korea's stance  
as a country of  
G20 presidency

7 Action  
Tasks

- 1 Action plan for national reduction goal
- 2 Make 10 core green technologies growth engine & facilitate start-up companies of outstanding green technologies
- 3 Full scale promotion of greening major industries (e.g. energy efficiency)
- 4 Facilitate green buildings, transportation, and green financing
- 5 Rationalize energy price & eco-friendly tax base
- 6 Green lifestyle practices based on 'Me First' spirit
- 7 Facilitation of international cooperation on green growth

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# Make 10 core green technologies growth engine & facilitate start-up companies of outstanding green technologies

## Growth Engine

### Next Gen. Secondary Cell

Improve weak points -parts/materials  
Develop basic/original tech.  
▶ Enhance mid-long term competitiveness

### Future Nuclear Power

Tech. of eco-friendly fast reactor,  
Nuclear hydrogen production system  
▶ Secure competitiveness of future nuclear power

### Advanced Water Treatment

Develop advanced water supply mgt. tech.,  
tech. of sewage, waste water reuse  
▶ Foster water treatment industry

### CCS

Establish CCS master action plan  
▶ Drastic decrease of GHG reduction cost

### Smart Grid

Establish infra for test bed in Jeju,  
legislation of special law  
▶ Become int'l leader through early commercialization

## Start-up Companies with Green Tech.

- (Start-up) Form start-up investment fund (e.g. Green Start-up Fund)(100bn. won)(Jun.)
- Establish business incubator specializing in green industries, foster 1,000 green tech. ventures by '13 (200 by '10)



## 6 Green lifestyle practices based on 'Me First' spirit

### Practice Campaign

- Green Start Network, Green Energy Family, 1 ton of Carbon Reduction per 1 household, and etc.

### Incentives for Carbon Reduction

- Carbon Cash-back
  - Cash point for purchase of low-carbon goods
- Carbon Point
  - Points provided according to energy saving

'Me First'

### Expansion of Green Consumption

- Full scale implementation of carbon labeling
  - Indicate GHG emission generated during Production and distribution

### Food Waste

- Strengthen volume based food waste fee system
- Spread small size/sectioned bowls for side dishes

## 7 Facilitation of International Cooperation on GG

### East Asia Climate Partnership (EACP)

- **Landmark project on Water**
  - To provide total solutions for water problem in developing countries
- **The 2<sup>nd</sup> East Asia Climate Forum (2<sup>nd</sup> half)**



### R&D Cooperation on GG

- **Establishment of Global Green Growth Institute (GGGI) (1<sup>st</sup> half)**
  - To support the establishment of GG policies for developing countries, particularly in Asia
- **Strengthen cooperation with OECD**
  - Joint research on 'Development of GG strategies for OECD'



### Climate Negotiation

- **Active participation in climate negotiation of post Copenhagen Accord**
  - To secure autonomy in climate change policies
- **Bridging role between developed and developing countries**
  - To continue efforts to reflect NAMA registry on future climate change regime





*Low Carbon Green Growth is*

**the road we should take,**

*and*

**the road we are taking now.**



**Thank you very much !**

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