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# Road to Our Future: Green Growth

National Strategy and the Five-Year Plan (2009~2013)





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# Executive Summary

At the 60th anniversary of the founding of the Republic of Korea on August 15, 2008, President Lee Myung-bak proclaimed “Low Carbon, Green Growth” as Korea’s new national vision. This vision aims to shift the current development paradigm of quantity-oriented, fossil-fuel dependent growth to quality-oriented growth with more emphasis on the use of new and renewable energy resources. Using less energy and ensuring environmental sustainability, “Low Carbon, Green Growth” aims to simultaneously pursue three objectives by creating a synergistic relationship between economic growth and environmental protection: (1) to promote eco-friendly new growth engines for the national economy, (2) to enhance the quality of life for the members of the society, and (3) to contribute to the international efforts to fight climate change.

In order to facilitate the realization of the new vision, the Presidential Commission on Green Growth was established in February 2009. The National Assembly is deliberating on the enactment of the Framework Law on Green Growth. The legislation will provide the legal and institutional basis for aligning all national and local rules and regulations under the overarching vision of green growth.

To implement the national vision of green growth more effectively, the National Strategy for Green Growth was adopted along with the Five-Year Plan for Green Growth. The National Strategy and the Five-Year Plan are mid- to long-term (2009~2050) national agendas which are to be implemented through the collaborative efforts between various governmental organizations, industries and civil society. The National Strategy is divided into ten specific policy directions:

- (1) effective mitigation of greenhouse gas emissions;
- (2) reduction of the use of fossil fuels and the enhancement of energy independence;
- (3) strengthening the capacity to adapt to climate change;
- (4) development of green technologies;
- (5) the “greening” of existing industries and promotion of green industries;
- (6) advancement of industrial structure;
- (7) engineering a structural basis for the green economy;
- (8) greening the land, water and building the green transportation infrastructure;
- (9) bringing green revolution into our daily lives; and
- (10) becoming a role-model for the international community as a green growth leader.

In order to put into action the agendas set out in the National Strategy in a more systemic and consistent manner, the Korean government revived the practice of the five-year plans, which had been very effective during the early development era of the Korean economy. The first Five-Year Plan for Green Growth, covering 2009 through 2013, is a manifest of the political commitments as well as a blueprint for government actions, containing specific budget earmarks and detailed tasks assigned to line ministries and local governing entities. Under the plan, the government will spend about 2 per cent of the annual GDP on green growth programs and projects that comprise the construction of various green infrastructures as well as spending plans for research and development of green technologies. The investments on the infrastructure will be initially much bigger than on R&D due to the ‘New Deal’ element, designed to counter the current economic downturn. However, as the economy recovers, the R&D portion will be increased.







## Excerpt from the Address by President Lee Myung-bak on the 60th anniversary of the founding of the Republic of Korea

August 15, 2008

"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.

Green technology combines information and communications technology, biotechnology, nano-technology and culture technology and transcends the boundaries between individual technologies to achieve a convergence effect. Green technology will help to create numerous jobs and become the new engine driving our future economic growth.

Green growth will bring about another miracle on the Korean peninsula to succeed the 'Miracle on the Han River.' "

# National Strategy for Green Growth

The National Strategy for Green Growth, with a mid- to long-term (2009~2050) perspective, encompasses policy guidelines as well as specific action plans for various entities. It is an integrated grand plan which was carved out through a collaborative process involving numerous governmental organizations, industry, the academia and civil society. The motivation behind developing the National Strategy for Green Growth has been the necessity of building a comprehensive long-term master plan to address the myriad of challenges exacerbated by both climate change and resource depletion.

## Imperatives for a National Strategy

### CLIMATE CHANGE

Natural disasters, destruction of ecosystems, environmental degradation and pollution pose major threats to humanity. Even with the government's strong commitment, the fight against climate change still remains a formidable challenge. In 2007, Korea's CO<sub>2</sub> emissions from fuel combustion reached 489 Mt(1.7% of the world's total) which is the 9th highest level in the world. To tackle these environmental challenges while simultaneously continuing economic growth, Korea is willing to make changes and transform the nation's economic and industrial structure in accordance with the low carbon green growth paradigm.

### ENERGY CRISIS AND DEPLETION OF NATURAL RESOURCES

If demands for conventional energy sources continue to rise, another global energy crisis may soon be triggered. To curtail the reliance on fossil fuels, Korea will make efforts to acquire new sources of energy, improve energy efficiency and promote the adoption of an energy-saving lifestyle by its citizens. Korea will strive to curb the use of fossil fuels by making massive investments in the new and renewable energy sector. By doing so, it will seek to circumvent the fluctuations in the global oil market.



## SHIFT TO A NEW PARADIGM

“Green Growth” will be the centerpiece of Korea’s vision for the next 60 years and will lead to new opportunities for economic growth. As demands for energy-efficient products, eco-friendly businesses and green markets increase in the coming years, a “Green Conversion” will be completed to enable Korea to achieve both economic growth and environmental protection.

## Ten Policy Directions to achieve Three Objectives

The National Strategy for Green Growth envisages three main objectives which are expected to be fulfilled in the process of taking actions in accordance with ten policy directions. The three objectives and ten policy directions are based on the consensus among the civil society, businesses, academia and government.

| Mitigation of climate change & energy independence                                 | Creating new engines for economic growth                                   | Improvement in quality of life and enhanced international standing                 |
|--|--|--|
| 1. Effective mitigation of greenhouse gas emissions                                | 4. Development of green technologies                                       | 8. Greening the land, water and building the green transportation infrastructure   |
| 2. Reduction of the use of fossil fuels and the enhancement of energy independence | 5. The “greening” of existing industries and promotion of green industries | 9. Bringing green revolution into our daily lives                                  |
| 3. Strengthening the capacity to adapt to climate change                           | 6. Advancement of industrial structure                                     | 10. Becoming a role-model for the international community as a green growth leader |
|  | 7. Engineering a structural basis for the green economy                    |  |

The first objective is to effectively deal with climate change and attain energy independence. Moving beyond fossil fuels will help Korea to achieve energy independence and effectively mitigate greenhouse gas emissions. This objective calls for actions such as setting mid- to long-term mitigation goals, increasing the use of new and renewable energy sources, as well as efficient management of demand for energy. Measures will be taken to strengthen the nation’s adaptation capacities to counter the adverse impacts of climate change. These include improving the climate monitoring and forecasting abilities and securing a stable supply of water resources, among others.

The second objective is to create new engines of growth on multiple fronts. This includes the development of green technology, greening of industries, transition to a more advanced industrial structure, and laying the groundwork for a green economy. Emphasis will be placed on increasing strategic investments in the R&D of the green sector, development of green small and medium enterprises, cutting-edge convergence industry and high value-added service industry, the creation of a national carbon emissions trading market, laying the structure for green finance, and tax incentives for eco-friendly activities.

The third objective is to raise the overall quality of life for the people and to enhance the contributions to the international community through strong advocacy for green growth. Efforts will be directed toward greening the land and water and building a green transportation infrastructure. As a result, green vehicles will be more widely utilized and bicycles will become the main means of city transportation. Campaigns will be conducted to promote public awareness and acceptance of green lifestyles. Furthermore, Korea will strive towards building its national image as a role-model for green growth by redoubling its efforts for mitigating climate change and assisting developing countries to effectively deal with the adverse impacts of climate change.



# First Rolling Plan to Put the National Strategy into Action

In order to fulfill the policy goals set out in the National Strategy, the Korean Government decided to revive the practice of five-year planning. It is true that the effectiveness of the five-year plans dwindled as the Korean economy more broadly embraced market economy principles. However, they had proven to be very effective and even pivotal up until mid-1990's, helping the Korean economy plow through the waves of difficulties during its development era since the first plan went into effect in 1962.



The revival of the five-year planning practice does not mean that Korea is returning to the development era. Rather, the practice is believed to be the most effective tool for consensus building in our society when it comes to achieving mid-term targets. This is particularly true because issues like green growth require backcasting in the sense that a society as a whole needs to agree as to what changes need to be made if it aims to move toward a desired state.

The practice also makes it easier for the government to accommodate the public sector's green investment in the national budget plan. Korea, like many other OECD countries, prepares both multi-year public expenditure plans and annual budget plans. The Five-Year Plans will evidence the government's priority in terms of budget allocation for the foreseeable future, which in itself gives a clear and unambiguous signal to the private sector.

The Five-Year Plans are mid-term programs designed to implement the long-term strategy for green growth. And the first one, which covers the period between 2009 and 2013, is the outcome of broad-based discussions among the civil society, businesses and government on how to implement the ten policy directions under the National Strategy over the next five years.

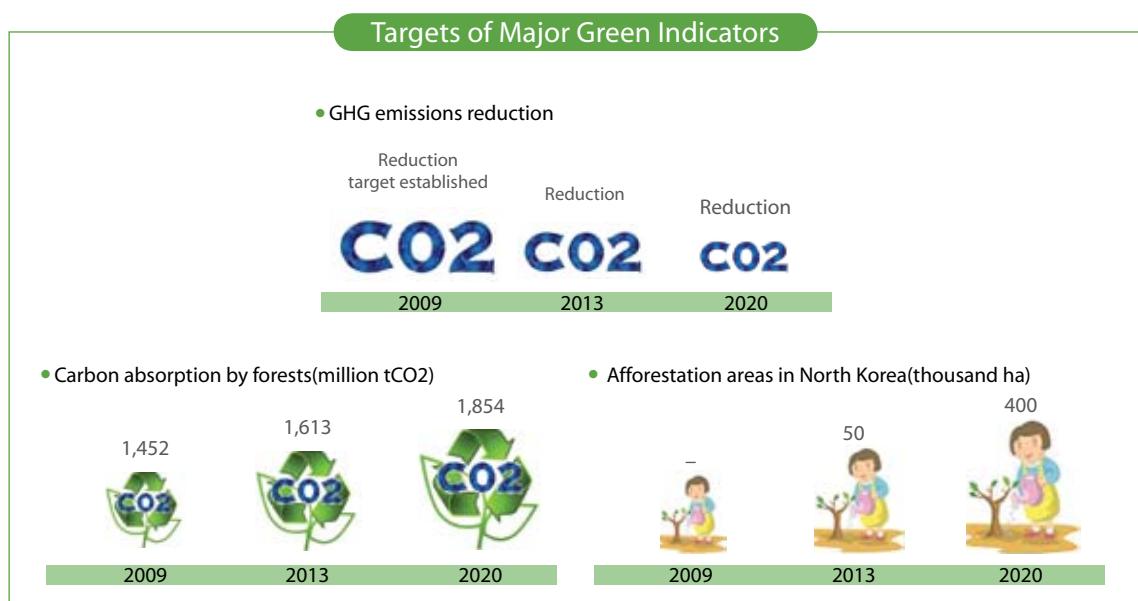
## Policy Actions for Each of Ten Policy Directions

### 1 Effective mitigation of greenhouse gas emissions

One of the most important tasks of the first Five-Year Plan is laying the groundwork for effective and sustained reduction of greenhouse gas emissions.

- To achieve its mid-term (2020) mitigation target for greenhouse gas emissions, Korea will set up mitigation strategies for buildings, transportation means and industrial sectors that are cost-effective.
- Korea will make it mandatory for relevant economic players to report their greenhouse gas emissions. Korea will build a national greenhouse gas inventory reporting system, and based on this system, design and implement its mitigation policy, including emissions trading mechanism. The inventory reporting system will greatly contribute to making carbon information more easily available.
- Forestation and sustainable forest management will be pursued to increase carbon absorption. Further efforts will be made to raise the overall carbon absorption capacity through preservation as well as creation of wetlands.
- Korea will support a 'Green Korean Peninsula' through the rehabilitation and restoration of degraded forests in North Korea and by helping to enhance North Korea's emergency response capacity against natural disasters in shared waters.

※ Greening projects in North Korea will be pursued in several phases through international organizations that will act as intermediaries, considering the inter-Korean relationship.





## 2 Reduction of the use of fossil fuels and the enhancement of energy independence

Korea imports 97% of its energy supply from overseas and 84% of the energy supply comes from fossil-based energy sources. In order to reduce the use of and reliance on fossil-based energy sources and move beyond oil, actions will be taken to enhance energy efficiency and increase the use and supply of clean, renewable energy which will contribute to national energy independence.

- Korea will increase energy efficiency levels to catch up with developed countries by effectively managing the energy demand in each sector and deploying energy efficiency technology. Through these policies, Korea will reduce energy intensity (toe/1,000 USD) from 0.317 in 2009 to 0.290 in 2013 and 0.233 in 2020.

- New and renewable energy supply will be increased from 2.7% in 2009 to 3.78% in 2013 and 6.08% in 2020 by industrializing new and renewable energy production, developing and distributing new and renewable energy according to the characteristics of households, buildings and cities, and applying renewable energy portfolio standard (RPS), which obligates increased renewable components in utilities.

- To reduce CO<sub>2</sub> output from power plants, Korea will enlarge the use of nuclear energy from 26% in 2009 to 27% in 2013 and 32% in 2020, while also increasing the export of nuclear power plants. This will have the additional benefit of boosting the Korean economy.

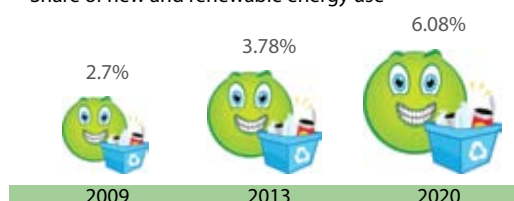
- Business enterprises specializing in overseas resources development will be encouraged to use their expertise and explore cooperative endeavors, with their activities calibrated to meet country-specific requirements.

### Targets of Major Green Indicators

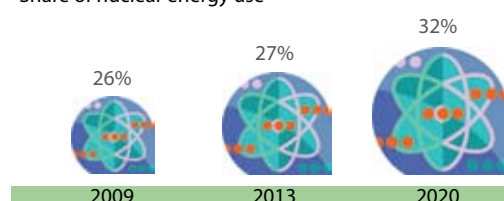
#### • Reduction of energy intensity (toe/1,000 USD)



#### • Share of new and renewable energy use



#### • Share of nuclear energy use





### 3 Strengthening the capacity to adapt to climate change

As adverse impacts of climate change are already apparent around the world despite the global efforts to reduce greenhouse gas emissions, Korea will establish and implement adaptation policies to minimize the damages from the adverse impacts of climate change.

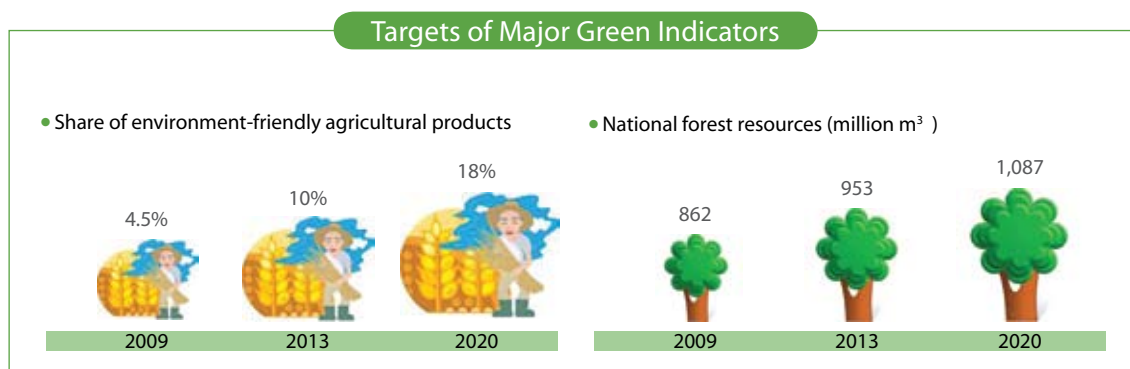
- Korea will expand its climate change monitoring system based on a three-dimensional (e.g., air-, ship- and satellite-based) observation system in order to further improve its climate change forecasting capacity and make available adequate information for more effective adaptation to climate change.

- To prepare for the possible disturbances in food supply as a consequence of climate change, Korea will develop "climate-friendly" food production technology, increase the share of environment-friendly agricultural products to 10% in 2013 and 18% in 2020, and strengthen international cooperation for a secure food supply.

- The four major river restoration project is expected to solve water shortages as well as seasonal flooding problems by securing an adequate supply of freshwater and strengthening flood controls. To prepare against droughts, a water conservation scheme will also be enhanced.

- Disaster response systems will be reformed taking into account the effects of climate change and early disaster forecasting and warning systems will be installed. Water resources management will be carried out within the wider context of the preservation of the ecological environment, and also in a way that can help the nation to better cope with water-related natural disasters.

- To increase and protect forest resources, urban forests and green areas will be built and forest fire prevention activity will be enhanced. Also, the protection of forest ecosystems will be strengthened to cope with the adverse effects of climate change.



## 4 Development of green technologies

Korea will work on developing technologies that will significantly contribute to reducing greenhouse gas emissions. By doing so, it will secure new engines for future economic growth and gain a competitive edge in the global market.

- Korea plans to launch intensive efforts to develop several important green technologies such as silicon-based solar cells, bio-energy, advanced light water reactor, high-efficiency fuel cells, integrated coal gasification combined cycle technology, and smart grids, boosting its global market share in the relevant sectors to 8 % within five years.

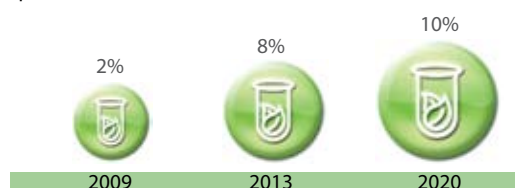
- Under the coordination and oversight of the Presidential Commission on Green Growth and the National Science & Technology Council, a mechanism will be put in place linking the academia, industry and research sectors involved in green R&D. This will energize R&D investment, boost efficiency, and help to establish a world-class green technology information structure including a testing and certification system.

- To promote and foster green technology transfer and commercialization, Korea will fortify the basis for practical application and industrialization as well as education, development of human resources and the establishment of the financial and banking infrastructure.

- Korea will also encourage and foster collaborative projects with world's leading green research institutes and offer incentives to attract green technology workforce and expand human resources exchange.

### Targets of Major Green Indicators

- Korea's market share in global green tech product market



- Number of foreign specialists in green tech working in Korea



## 5 The 'greening' of existing industries and promotion of green industries

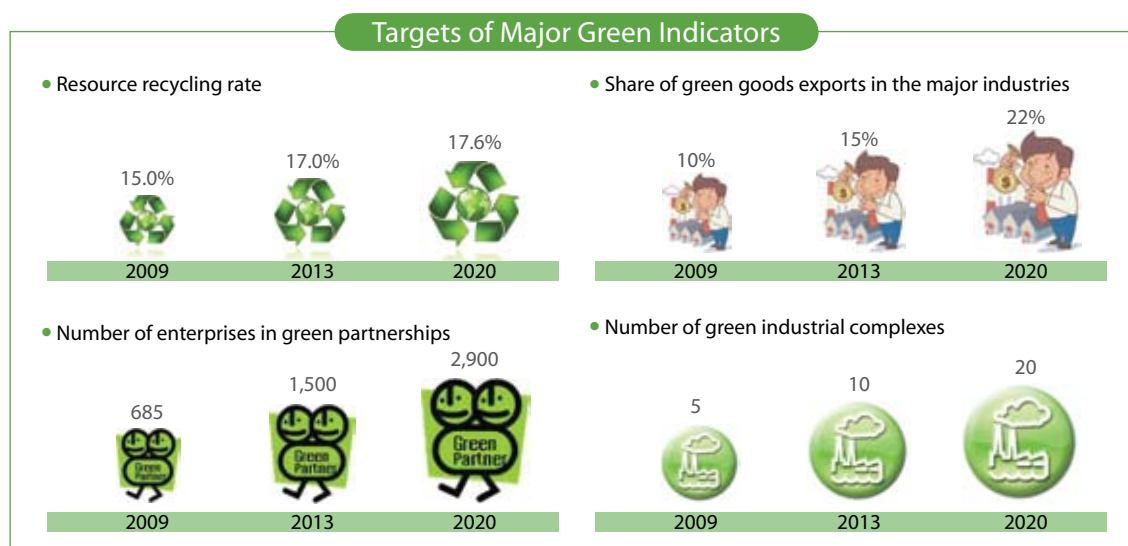
Considering that 57% of Korea's energy consumption occurs in the industrial sector, which proves the pervasiveness of traditional energy-intensive manufacturing patterns in the nation's economic structure, it is imperative for Korea to pursue industry-wide low carbon high efficiency.

- Korea will systematically manage the recycling of resources throughout the entire manufacturing process of factor input, production, use, disposal and recycle, thereby firmly establishing the 3R – reduce, reuse and recycle – as the governing principle. Urban mining of wastes will be encouraged to extract and distill precious metals such as gold and silver. The resource recycling rate will be raised from 15% in 2009 to 17% in 2013 and 17.6% in 2020.

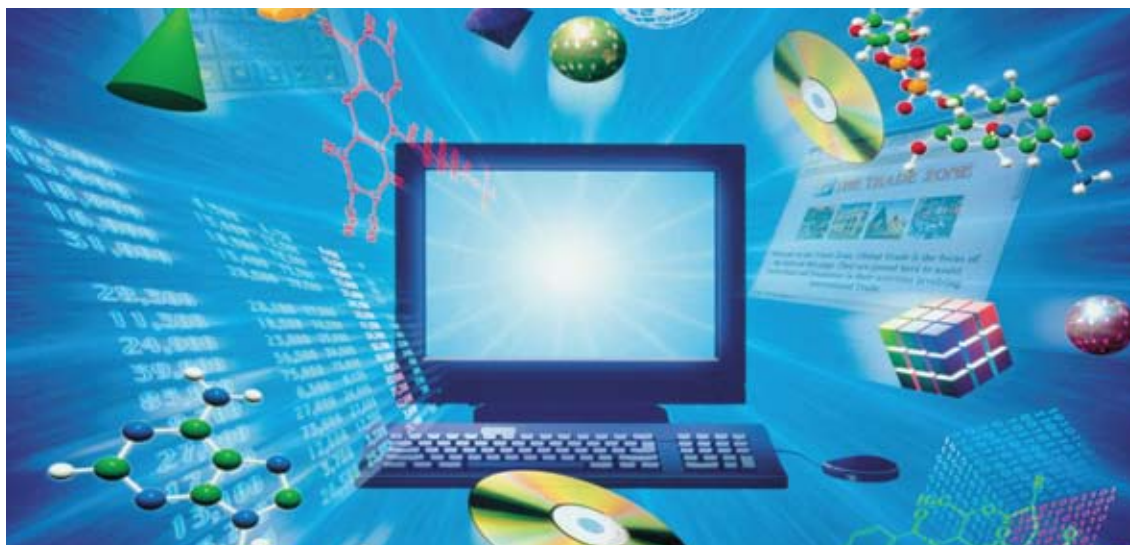
- Korea's major strategic industries such as steel, cars, semiconductors, shipbuilding and chemistry will be encouraged to increase the green portion in R&D and plant equipment investment. Through the assistance for eco-friendly plant building and other commercially viable green projects, green goods exports in the major industries will be increased from 10% in 2009 to 15% in 2013 and 22% in 2020.

- The Korean government will encourage small and medium enterprises (SMEs) to green their businesses by providing assistance in R&D, expanding government procurement of green goods from SMEs and assisting them in finding export markets for their products. Also, assistance will be offered to diagnose the extent of SMEs, and help enhance their capacities through green partnerships with big enterprises. The number of participating enterprises in green partnerships will be increased from 685 in 2009 to 1,500 in 2013 and 2,900 in 2020.

- By tapping the green potentials of regions, green clusters will be created to achieve a virtuous cycle through cooperation and technological innovation. Green clusters will be typically formed where co-operation between industry, academia and research institutes can be most efficiently pursued. Synergy effects are expected from the physical concentration of green industries in one place. Green industrial complexes with circulation facilities where waste energy and by-products can be reused and recycled will be expanded from 5 in 2009 to 10 in 2013 and 20 in 2020. Circulation process will use the 3R technology and information technology that will be widely applied in green industrial complexes and throughout their work processes.



## 6 Advancement of Industrial Structure



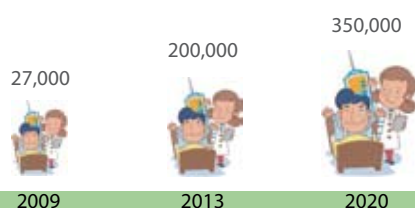
Since Korea's economic performance is in large part owed to its manufacturing prowess, it is a challenge for Korea to reduce greenhouse gas emissions that are produced in the manufacturing process. State-of-the-art convergence technology industries that utilize information and communications technology, and high value-added industry, where energy intensity per unit/value is much lower, will help Korea to pursue climate change mitigation and sustainable development simultaneously.

- Korea will energetically develop six major sectors - healthcare services, education, financing and banking, contents industry, software, and tourism industry - as the core of its high value-added service industry. With the improvement of the healthcare services industry, many foreign patients will benefit from traveling to Korea for its world-class medical treatment. Educational systems will also be further refined, advancing the development and popularization of ubiquitous learning.

-The state-of-the-art convergence technology industry will be actively promoted, including broadcasting and telecommunications, information and communications technology, robotics, new materials, nano-materials, bio resources, medical appliances, and green food industry. By combining information technology with more traditional manufactures such as cars and shipbuilding, new grounds will be gained, along with the sharpened competitive edge and increased value-addition.

### Targets of Major Green Indicators

#### • Number of foreign patients receiving healthcare in Korea



#### • Broadcasting and telecommunications convergence industry exports



## 7 Engineering a structural basis for the green economy

By laying the groundwork for the green economy, it will become much easier to attain the greenhouse gas mitigation goals and boost green growth. Korea will lay the basis for the green economy with a focus on extending public assistance to and increasing investments on green enterprises. Korea will introduce a carbon emissions trading system, adopt environment-friendly tax system and overhaul the regulatory system in a climate-friendly manner.

- Korea will gradually introduce the carbon emissions trading system with the objective of creating a viable domestic carbon market with the estimated trading volume of 500 billion KRW(0.4 billion USD) in 2013 and 2 trillion KRW(1.6 billion USD) in 2020.

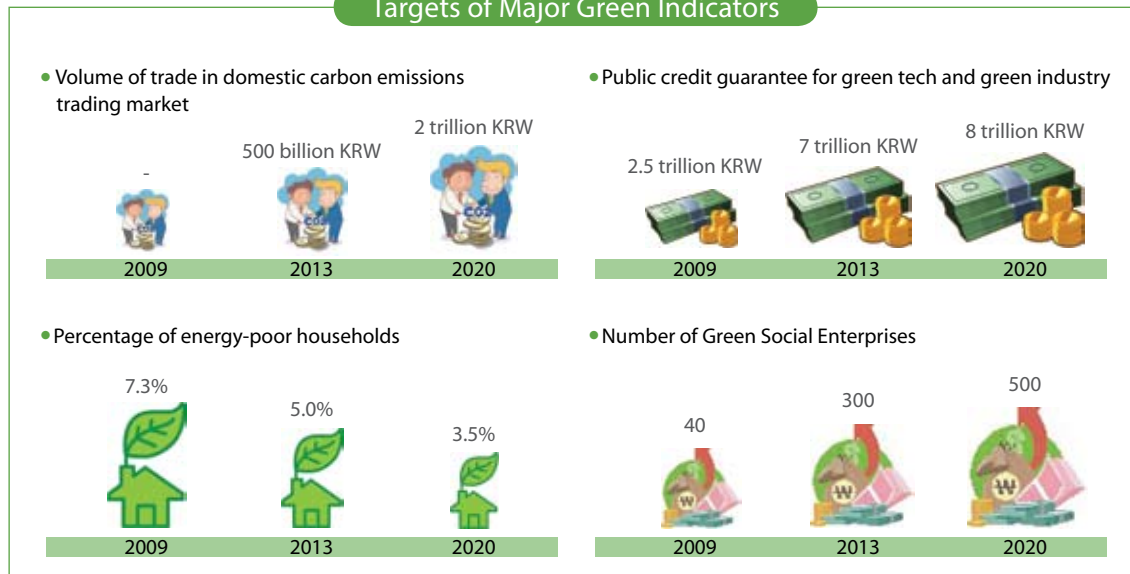
- Public credit guarantee will be provided to the green technology and green industry sectors, with the total amount of assistance increased from 2.5 trillion KRW(2 billion USD) in 2009 to 7 trillion KRW (5.6 billion USD) in 2013 and 8 trillion KRW(6.4 billion USD) in 2020. The Korean government will encourage the private sector, especially the enterprises, to disclose carbon and environmental information, develop green stock index, increase investment in green financing and develop new financial products.

- The tax system will be overhauled in a more environment-friendly way and tax benefits will be extended to producers of green goods and green investors. Incentive/disincentive systems will be installed to encourage greenhouse gas emissions reduction, improve energy efficiency and enhance green economy-related activities.

- Measures will be taken to improve energy efficiency in low-income households, to recognize the basic rights to minimum level of energy use, and to increase energy welfare funding, thereby reducing the ratio of energy-poor households from 7.3% in 2009 to 5% in 2013 and 3.5% in 2020.

- Comprehensive information systems on green jobs will be made available for job-seekers. In addition, the National Technical Qualification Testing System will be modified to better reflect and lead domestic green trends with the purpose of facilitating and encouraging employments in the green industries. Furthermore, green social enterprises will be intensively cultivated with an aim to reach approximately 300 in numbers by 2013 and 500 by 2020, which will lead to an increase of new green jobs.

### Targets of Major Green Indicators



## 8 Greening the land, water and building the green transportation infrastructure

Along with transforming the energy-intensive industrial structure, to effectively reduce greenhouse gas emissions, green urban planning and the greening of buildings and transportation are necessary. Particularly, it will be taken into account that buildings and transportation take up 43% of Korea's emissions.

- Green city designs that are appropriate to Korea's environment will be selected to construct carbon-neutral new cities and rehabilitate the dilapidated parts of the cities. Korea will develop these cities to the level that can be designated by the UNEP as green cities.
- Green centers such as the four major rivers, reclaimed land, and various coastal areas will be increased.
- Korea will expand nature reserve areas from 100,000 ha in 2009 to 150,000 ha in 2020. Also, ecological space will be widened through the restoration of city streams and the increase of forestation in the cities, which is expected to have the effect of enabling the city-dwellers to garner environmental benefits and thus acquire environment-friendly values.
- Energy efficiency ratings and green building rating systems will be expanded. Design guidelines and incentives will be offered to encourage the construction of green buildings. The government will take the lead in applying the green building code to the construction of public housing, public office buildings, schools and public welfare institutes.
- Green transportation and mass transportation will be increased. The share of passenger transportation by rail will be increased from 18% in 2009 to 22% in 2013 and 26% in 2020. The overall share of the mass transit will be increased from the current 50% to 55% by 2013 and 65% by 2020.
- Bicycles will be promoted as convenient and important green transportation means. The volume borne by bike transport will be increased from 1.5% of the total passenger transport volume in 2009 to 5% by 2013 and 10% by 2020. Public bike rentals will be offered and national bike road networks will be expanded.

### Targets of Major Green Indicators

#### • Nature reserve areas(thousand ha)



#### • Share of passengers transporting by rail



#### • Share of bicycle transportation





## 9 Bringing green revolution into our daily lives

Korea plans to actively foster civil society participation in green growth. Campaigns will be conducted to raise public awareness and achieve social consensus on the necessity of green growth. This campaign is expected to induce the voluntary participation of citizens to make it the social norm to adopt environment-conscious, 'green' lifestyles.

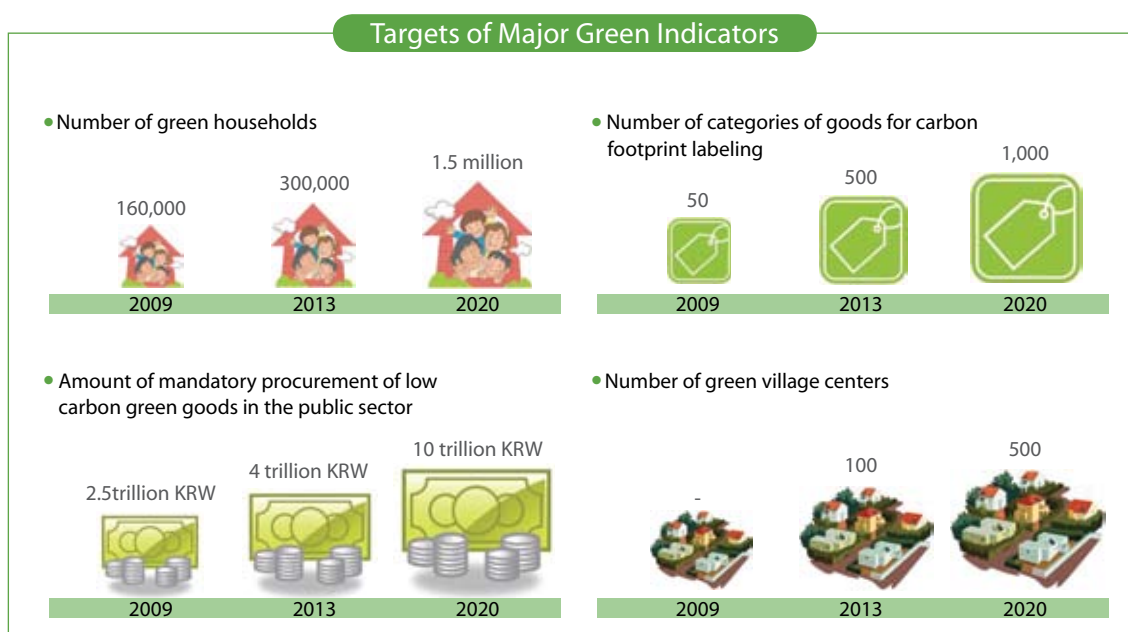
- Educational goals will be set up to produce tangible results in green growth throughout society. Regular school curriculums as well as continuing education for adults will promote green growth. Educational materials on green growth will be developed and distributed to the general population as well as schools.

- The green lifestyle index will be developed for citizens. Also, model lifestyles will be recommended to inculcate low carbon habits. Nationwide green life movement will be launched with the purpose of fortifying green life networks which is to be dubbed Green Start. Incentives such as the carbon point system will be offered to increase the proportion of green citizens and green households to 10%(1.5 million) of the general population by 2020.

- Carbon footprint labeling and certifying system for goods will be enacted, and green store certification schemes will be introduced to induce green consumption in the private sector. Also, the public sector will increase the mandatory procurement of low carbon green goods, thus leading the green consumption trend.

- At a local level, a voluntary low carbon smart village movement will be promoted. The green village centers at the seat of local governing entities will be expanded to 500 by 2020.

- Ecological tourism will be promoted and developed as an environmentally responsible tourism mode. Pilot projects will be launched, infrastructure for eco-tourism will be expanded, and attractive tour packages will be offered. Professional eco-tour guides will undergo adequate training and their qualifications will be ensured by a certification system.



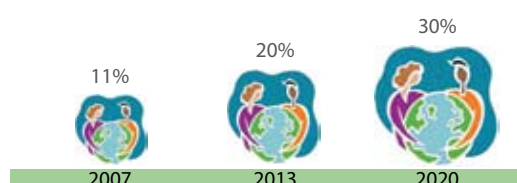
## 10 Becoming a role model for the international community as a green growth leader

Korea will strive to become a role model for green growth in the same way that it has been a good example for economic development in the past. Korea will play its part in promoting green growth by offering full cooperation on the global stage. It will also provide assistance to developing countries to help them realize green growth.

- Korea will actively engage in international negotiations on climate change and make contributions by playing a constructive role in building an effective global climate regime.
- Between 2009 and 2012, the East Asia Climate Partnership will be the main conduit through which the Korean government will offer assistance and cooperation to neighboring developing countries in Asia to help them combat climate change. In addition, "World Friends Korea," the overseas volunteers program, will be enlarged and will more actively engage in green growth activities in developing countries.
- Korea will also increase the amount of official development assistance, while raising the proportion of Green ODA to 20% by 2013 and 30% by 2020, compared to 11% in 2007. Also, contributions to multilateral organizations such as the UN Global Environment Facility will be expanded.
- As showcases for green growth, green growth urban models will be built and green industrial clusters that employ green technologies and green systems will be utilized. Also, the Korean government will strongly support effective multilateral organizations to spearhead green growth efforts in Asia.

### Targets of Major Green Indicators

#### • Proportion of Green ODA



#### • Number of "World Friends Korea" volunteers dispatched overseas





# Green Growth Investment Plans

The envisaged fiscal spending as contained in the Five-Year Plan for Green Growth is 107 trillion KRW(86 billion USD) for 2009-2013. Under the plan, three objectives and ten policy directions will be implemented in an efficient and predictable manner.

- The fiscal budget will be mainly spent on R&D in green technology, such as solar energy and fuel cells, restoration of the four major rivers and green transportation. As the economy recovers, the weight given to R&D will become more significant.

Fiscal realities will be appropriately reflected as well as the mid-term plan covering 2009 through 2013. Budget priority will be appropriately rearranged so that the budget for important programs can be speedily implemented.

- Roughly 2% of the nation's annual GDP is allocated to green investment which is twice the amount recommended by the Green Economy Initiative advocated by the UNEP (1% of GDP).

## 〈Fiscal Expenditure on Green Growth for 2009-2013〉

(trillion KRW, %)

| Key Category   | Total <sup>1)</sup> | '09         | '10~'11     | '12~'13     | Rate of Increase |
|--|---------------------|-------------|-------------|-------------|------------------|
| <b>Total</b>   | <b>107.4</b>        | <b>17.5</b> | <b>48.3</b> | <b>41.6</b> | <b>10.2</b>      |
| ■ Mitigation of climate change & energy independence                 | 56.9                | 8.6         | 29.2        | 19.2        | 14.0             |
| ■ Creating new engines for economic growth                           | 28.6                | 4.8         | 10.7        | 13.1        | 9.4              |
| ■ Improvement in quality of life and enhanced international standing | 27.9                | 5.2         | 10.5        | 12.2        | 3.6              |

1) The total amount eliminated overlaps among allocations to projects under the 10 policy directions.



# Expected Benefits of Green Growth

The necessary infrastructure for the development of green technology, green SMEs and the cultivation of the cutting-edge convergence industry will be built in order to develop new engines for future economic growth. The four major river restoration project and green transportation development will be a significant part of the overall green infrastructure building.

- As the overall infrastructure for green growth improves and expands, various spill-over effects such as production increase, value-addition, and creation of jobs are expected to occur on several fronts.
- Green technology application on green cars, light-emitting diodes and solar cells will greatly contribute to raising the overall economic productivity and thus redouble the economic spill-over effect.

The five-year plan for green growth is expected to have a positive effect on production inducement in the amount ranging from 182 to 206 trillion KRW(146 to 165 billion USD) over the next five years. This translates into an annual sum of 36 to 41 trillion KRW(29 to 33 billion USD), which is about 3.5% to 4.0% of Korea's annual GDP. And the value-added effect is estimated at 75 to 95 trillion KRW(60 to 76 billion USD) over the next five years, and annually 15 to 19 trillion KRW(12 to 15 billion USD) which amounts to 1.5% to 1.8% of Korea's annual GDP.

The number of jobs created is estimated at 1.56 to 1.81 million and the annual average will be 0.31 to 0.36 million jobs.

- One distinctive characteristic of the five-year plan is the creation of jobs for both skilled and unskilled laborers. Skilled jobs include greenhouse gas emissions certifiers, emissions permits trading certifiers, green building evaluators and certifiers, and green building certifiers, among others.
- Unskilled laborers will be able to find jobs in forestation, green landscaping along the waterways and construction of small- and medium-sized dams, among others.

## 〈Expected benefits of green growth for 2009-2013〉

(trillion KRW, 10,000 jobs)

| Key Category |                | Inducement of Production | Inducement of Value Addition | Inducement of Job Creation |
|--------------|----------------|--------------------------|------------------------------|----------------------------|
| Scenario 1   | Total          | 181.7                    | 75.0                         | 156.1                      |
|              | Annual Average | 36.3                     | 15.0                         | 31.2                       |
| Scenario 2   | Total          | 206.0                    | 94.9                         | 180.5                      |
|              | Annual Average | 41.2                     | 19.0                         | 36.1                       |

OVERVIEW OF THE REPUBLIC OF KOREA'S GREEN GROWTH NATIONAL VISION (UNEP, August 2009)

The Republic of Korea has committed itself to moving away from the traditional "brown economy" growth-at-any-cost model to a "green economy" model where long-term prosperity and sustainability are the key objectives. This commitment by the Republic of Korea has the potential of creating a domino effect on the other major Asian economies.