

# • Republic of Korea's Carbon Neutral Policies•

2022. 8. 19.



환경부

Ministry of Environment

# 01

## Korea's Circumstances



# Background (背景)

## Frequent Extreme Weather Events · Movement of Major Countries

### Portugal · Spain

Heat wave in 2019, 2022  
45.9°C, highest temp. since record began.



### Russia (Siberia)

In Jun. 2020,  
38°C, highest temp.  
since record began in Verkhoyansk.



### Korea



### Japan

In May 2019,  
39.5°C, highest temp. since record  
began in Hokkaido.  
In summer of '20, heavy downpour in  
southern west region and nationwide heatwave.

### U.S.

In summer of 2020, about 100  
points estimated to exceed highest  
temperature (CNN),  
second biggest wildfire in California  
(4,000km)



### Mozambique · Zimbabwe

In Mar. 2019, cyclone Idai killed 780 and  
injured 40 people, leaving 1.8 mn people  
displaced



### China

In summer of 2020, floods displaced 60 mn  
people, leaving KRW30 tn. of economic  
loss (as of 13 Aug.)



### Australia

During Sep., 2019–Feb. 2020, wildfire  
burned down 180,000km<sup>2</sup>\* of forests  
\* 85% of Korean peninsula



### Brazil

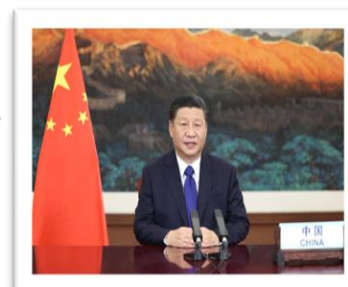
In Feb. 2019, heavy  
rainstorm and wind in  
eastern region killed 6  
people



Europe  
European Green  
Deal Adoption (Dec. '19)



U.S.  
Speech at Leaders'  
Climate Summit  
(April, '21)



China  
Speech at UN  
General Assembly  
(Sep. '20)

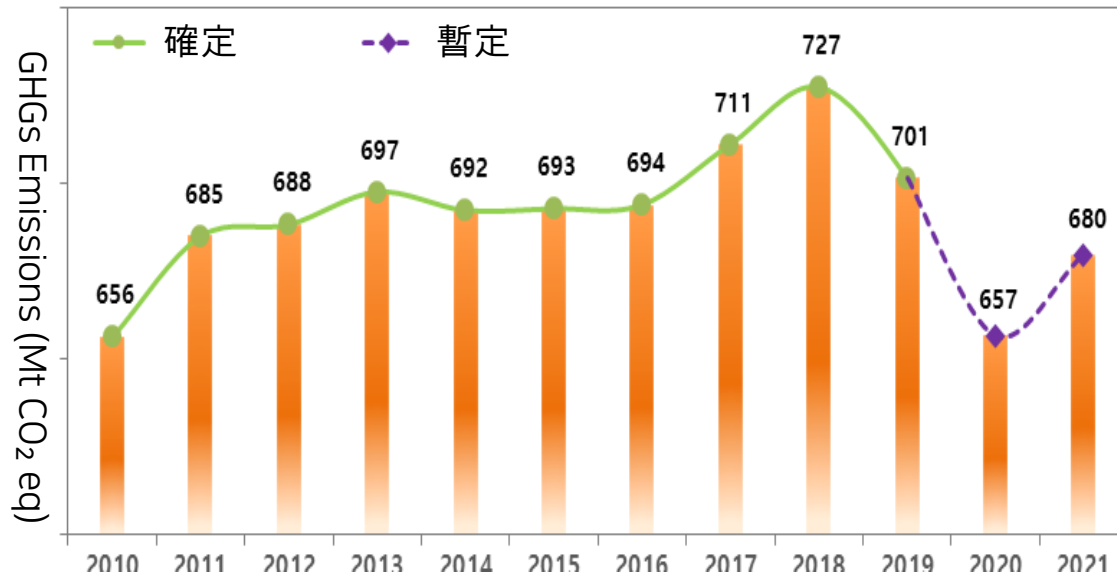


Japan  
Speech at  
Parliament  
(Oct. '20)

# The Accomplishments (成果)

## The Tendency of Quantity of GHG emissions

- ☑ Descending tendency of GHGs Emissions



## The Vision & Implementation for Net-Zero

- ☑ 2050 Carbon Neutral Scenario,  
Rebalancing the 2030 NDC (2018年比 26.3% → 40%)
- ☑ Establishment of Carbon Neutral Act(2021.9.24)

## The Transition to Green & Circular Society

- ☑ Law Enactment for Green Finance, Green Industry Cluster
- ☑ Act and Policy Establishment for Circular Economy








(Image source : greenium.kr)

# The Further Directions (改善方向)

## The Necessity of Concrete Roadmap to Net-Zero

- ☑ Rebound of GHGs emissions regarding COVID19 resilience

Countries		Estimated Increase Rate of GHGs Emissions (‘21 by ‘20) ※ Source : Enderdata
	USA	5.2%
	EU	2.0%
	China	5.0%
	Japan	1.8%
	Korea	3.5% (NGMS, potential value)

- ☑ Controversy among Viability of 2030 NDCs and 2050 Net-Zero

## Base Reinforcement for Green Transition

- ☑ Relatively Low-Level Green tech by Leading Countries

- 81.1% Green Tech-level Difference by USA-EU
- Tech-Gap 3.7 years difference by USA-EU (‘20)

- ☑ Substantialization

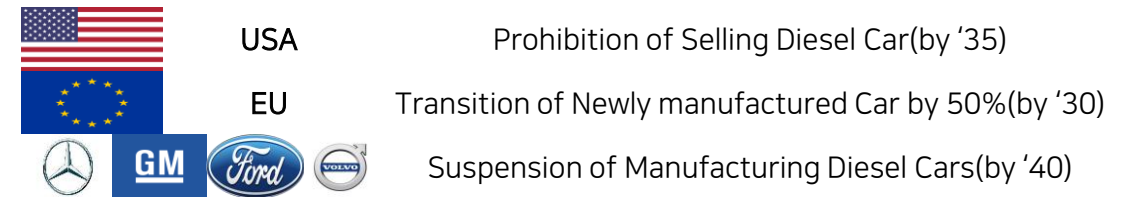
- Increasing Market Size(14% increase rate, ‘20 by ‘19),
- Proportion of Small Business 74.4%

## Distribution of Green Vehicles

- ☑ Decrease of Diesel Vehicles, Increase of Green Vehicles

- Decreasing Low-Energy level Diesel Cars : 2.58 M (‘18) → 1.31 M (‘21)
- Increasing Green Cars : 56 K (‘18) → 257 K (‘21) (1.03% of Total Vehicles)

- ☑ Response to Major Market's Change



- ☑ Enlargement of Infrastructure for Green Vehicles

## Flexible Circular Economy Policy

- ☑ Delivery Enlargement(COVID19, Social Distancing)

Package Waste Increase (Delivery Service 21% ↑, Food Delivery 78% ↑)



Img source : Google

- Package Waste (‘20 Q1 by ‘19 Q1)
- Plastic 20% ↑
  - Paper 15% ↑
  - Vinyl 8% ↑

# 02

## Policy Direction of The New Administration



# Carbon Neutrality Policies (炭素中立定策)

## Implementation through Plans, Policies, Schemes

### ☑ Establishment of Basic National Plan

- Establish Basic National Plan for Carbon Neutrality and Green Growth
- Improve Communication with Stakeholders(Industry representatives, etc)

### ☑ Mitigation Policies


- Climate-Responsive Budgeting, Climate impact Assessment, etc

## Response to Major Market Change

### ☑ Improvement of K-ETS for Carbon Barriers to Trade

- Modify of auctioning rate considering global market standard(CBAM, etc)

< Phasing out of EU ETS Free allowance allocation('22.6.22) >

	2027	2028	2029	2030	2031	2032
	93%	84%	69%	50%	25%	0%

- Supporting the Industries by Auctioning on K-ETS
  - Enlarges the installment of facilities reducing the carbon emissions
  - Promote investment on Reducing endeavors of industries

## Act with Local Governments and People

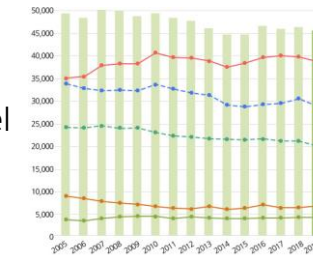
### ☑ Strengthen the Capacity Building of Local Governments

- Establish the Carbon Neutrality Support Centers
- Discover Regionally Customized Complex Models for Carbon Neutrality
- Establish the GHGs emissions & absorptions information system on local governmental level



Img source : Ministry of Environment

Metropolitan level  
→ Municipal level



Ground Observation  
Network Expansion

Img source : Seoul Metropolitan Government

### ☑ Enlarge the Participation of the People

- Carbon Points Scheme
- Carbon-Neutral Action Point Scheme



Img source : Amorepacific website

Refill  
Station



E-Receipt

Img source : Koit webpage



# Carbon Neutrality Policies (炭素中立定策)

## Energy Mix Change and Response to Market

### ☑ Management for Reasonable Energy Mix & Market Change

- Science-based measures to Achieve Carbon Neutrality and NDC goal
- Management for Energy mix concerning Nuclear Power and Renewable E



Img source : Chungang Newspaper



Img source : Parliament Magazine

- Improvement for Renewable Energy Industry
- Infrastructure Development for Stable and Clean Hydrogen Produce



Img source : Voice of Jeju Newspaper



Img source : Energy-Environment Newspaper

## Transition to Green & Circular Society

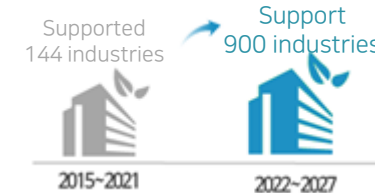
### ☑ Decarbonizing the Economy and the Industries

- Revise of K-Taxonomy('21.12) considering EU Taxonomy



Img source : Blue Auditor

- Investment and Promoting for Industries towards ESG



- Support for Environmentally Responsible Investment
- Support for Business to Adapt to the New order
- ESG Management Consulting

- Transition to Green Consumption



- Reinforce the Eco-Labeling Standards (Towards 30% top Percentages)
- Add More Products for Eco-Labels



# Carbon Neutrality Policies (炭素中立定策)

## Transition to Green & Circular Society

### ☑ Focus on Promotion for Green Industries and Green Tech

- Intensive Investment in Environmental R&D (Goal : 2.1 Trillion Won '22~'26)
- Green Industry Cluster for Growth of Green Industries
- Promotion for 10 Major Green Industries (Clean Air, Hydrothermal E, Climate Tech, Biogas, Post-Plastic Materials, etc)



Img source : Khan Journal

### ☑ Transition to Green Vehicles

- Regulations for Diesel Vehicles
- Promotion for Green Vehicle and Green Vehicle Infrastructures



Img source : Hyundai Motors



Img source : Naver Blog

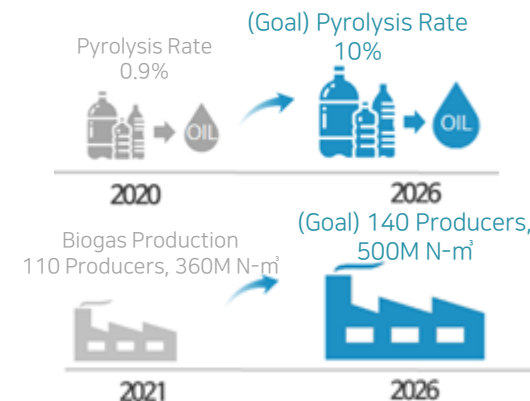
### ☑ Circular Economy at Total Life Cycle by Every Level

- Decoupling for Economy Growth and Waste Reduction



- Reduce Waste generation
- Ban single-use products
- Promote the Usage of multi-use products
- Advanced Waste Screening Technology

- Expansion of the Recycling for Higher Value



- Mandatory Use for Recycles Plastics
- Production of Plastic Pyrolysis based Oil
- Production of Biogas using food, sludges

# 03

## Carbon-Neutral Cities And Climate Change Adaption Plan of Korea



# Cases of Carbon-neutral cities in Korea

## Foundation of local governments carbon neutrality

- ☑ "Framework Act on Carbon Neutrality and Green Growth to Cope with Climate Crisis" emphasizes the responsibility and role of local governments to achieve carbon neutrality

## Local governments carbon neutrality by 2050

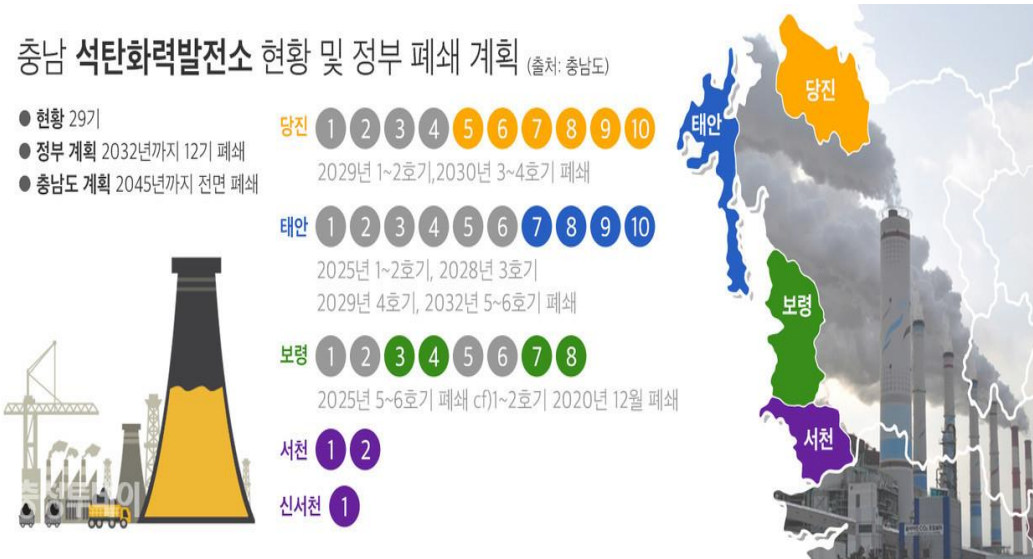
- ☑ All the local governments declared carbon neutrality by 2050 at the 2021 P4G summit seoul



# Cases of Carbon-neutral cities in Korea

## Cases of Carbon-neutral cities in Korea

- ✓ Dobong-gu, Seoul is the first local government to enact an ordinance for carbon neutrality
- ✓ Chungcheongnam-do is leading a clean energy transition
  - First East Asian region to declare "climate emergency"
  - Announcement of early carbon neutrality by 2045



- ✓ Daeduck-gu, Daejeon prepared ordinance for the operation of carbon cognitive budget system
- ✓ Jeollanam-do is operating a carbon-neutral TF to cope with high carbon emission sectors, such as petrochemical, steel, and shipbuilding
- ✓ Gwangju declared carbon neutrality and energy independence by 2045





# National climate change adaptation plan of Korea

## The 3<sup>rd</sup> national climate change adaptation plan

- ✓ Korea establishes national climate change adaptation plan(NAP) for every five years  
\*(1<sup>st</sup>) 2011~2015, (2<sup>nd</sup>) 2016~2020, (3<sup>rd</sup>) 2021~2025
- ✓ The NAP is based on “Framework Act on Carbon Neutrality and Green Growth to Cope with Climate Crisis”



## Expected achievement of 3<sup>rd</sup> NAP

- ✓ Upgrading climate change monitoring and forecasting system for more accurate and prompt information
- ✓ Protecting people's lives and property through special management of the vulnerable to climate change
- ✓ Making contribution to international society
- ✓ Enhancing sustainability of nature and protect species vulnerable to climate change
- ✓ Enhancing public participation in the entire adaptation process

# Vision and schematic diagram of 3<sup>rd</sup> NAP of Korea



## The 3<sup>rd</sup> National Climate Change Adaptation Plan (2021-2025) of the Republic of Korea

