
Facilitative Sharing of Views

Republic of Korea

Second Biennial Update Report

June 19, 2019
SB50 – Bonn, Germany



The Government of
the Republic of Korea

Overview

- 1 NATIONAL CIRCUMSTANCES
- 2 NATIONAL GHG INVENTORY
- 3 MITIGATION ACTIONS
- 4 INT'L SUPPORT AND COOPERATION



Profile of the Republic of Korea



- Limited access to power grid connected to neighboring countries
- Lack of natural resources and alternative energy options

“Abnormal climate in 2018”

- *No. of heat wave days: 31.4*
- *No. of tropical nights: 17.7*

▶ Top five heat wave days and tropical nights since 1973

Ranking	No. of heat wave days		No. of tropical nights	
1	2018	31.4	2018	17.7
2	1994	29.7	1994	17.4
3	2016	22.4	2013	15.8
4	2013	18.2	2010	12
5	1990	17	2016	10.8

National Economy

- Scale of growth between 1990 and 2016

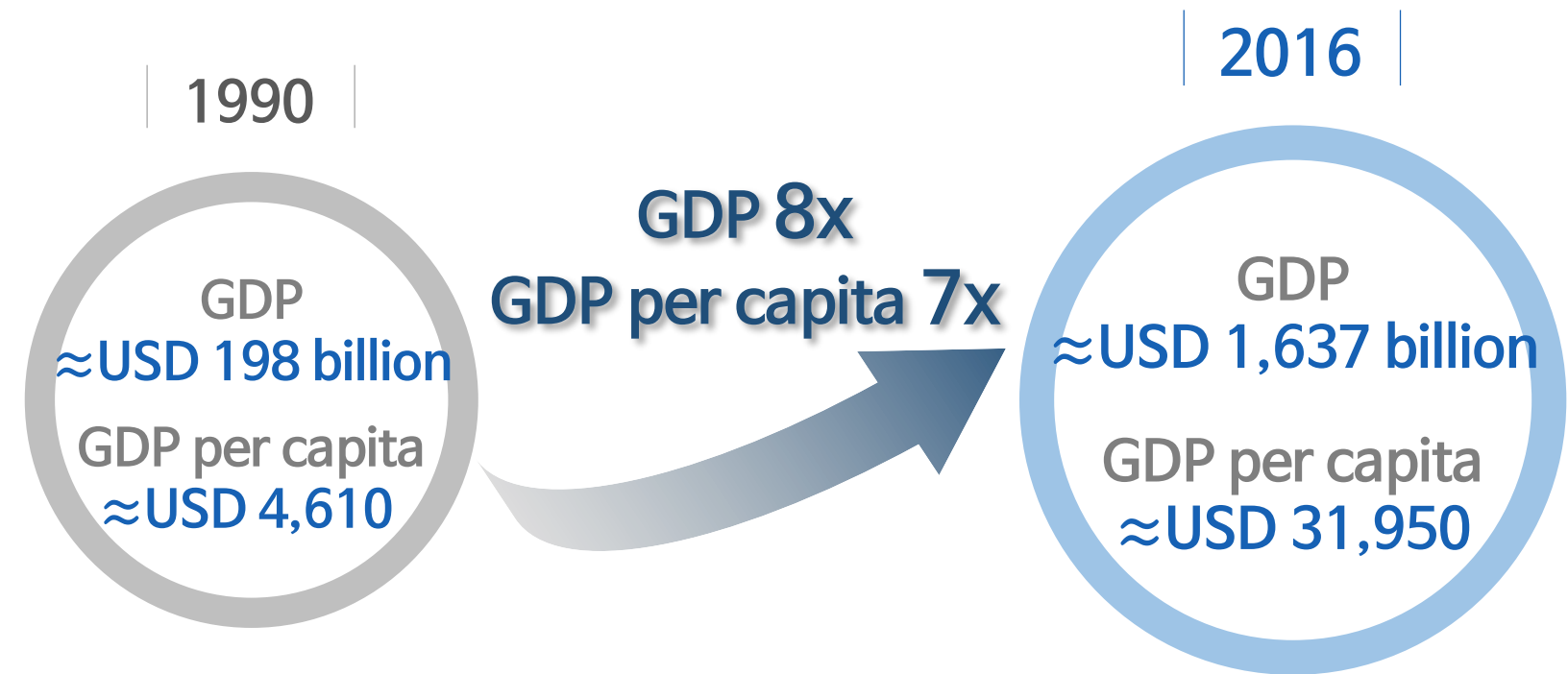
Nominal GDP and its GDP per capita grew eight- and sevenfold respectively

- Korean economy in a mature phase

Annual growth rate of real GDP* has stabilized at around 3.0% on average since 2011 after having recorded 9.3% in 1990

* Real GDP in 2010 KRW

- Exports and the manufacturing sector play a significant role in the national economy



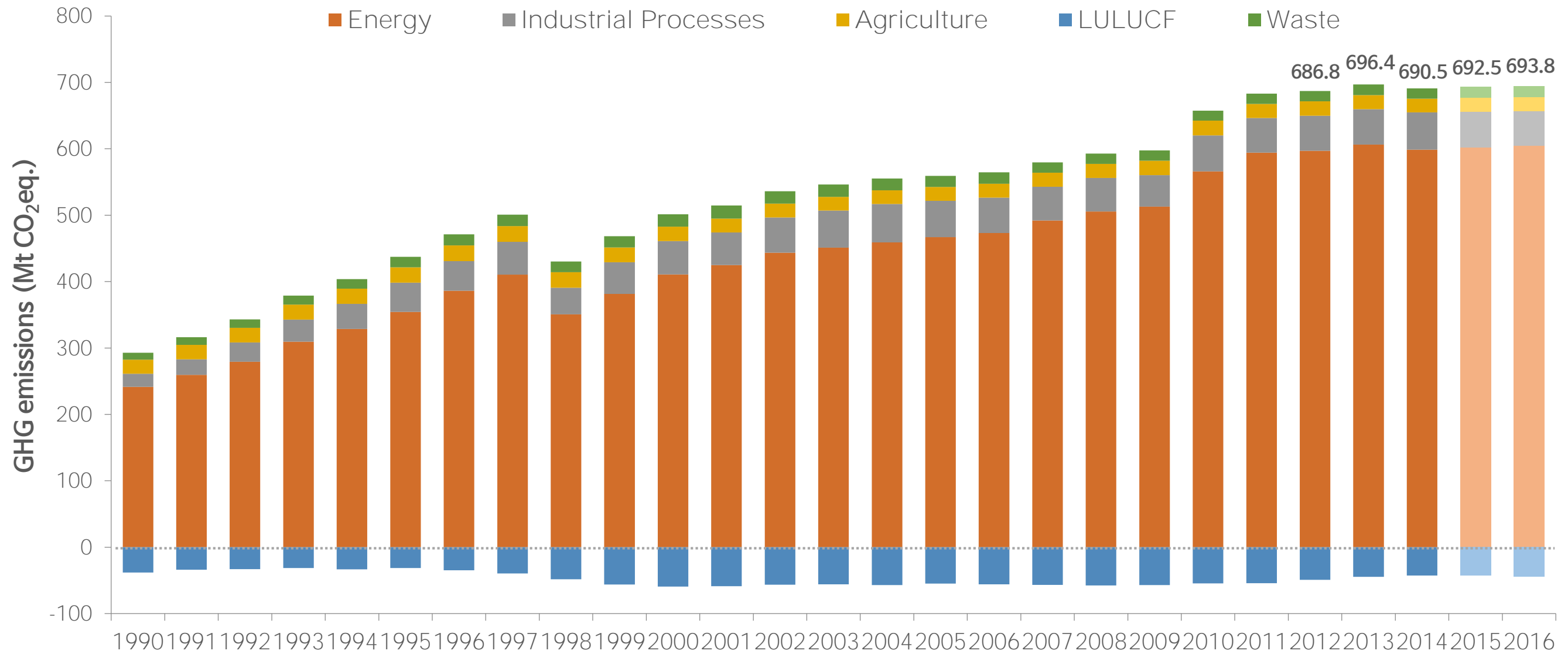
(Unit: %)

Type \ Year	1990	1995	2000	2005	2010	2011	2012	2013	2014	2015	2016
Dependence on exports	23.3	22.5	30.7	31.7	42.6	46.2	44.8	42.9	40.6	38.2	-
Share of manufacturing sector	27.3	27.8	29.0	28.3	30.7	31.4	31.0	31.0	30.2	29.8	29.3

2. National GHG Inventory

GHG Emissions and Removals

(1990-2016)

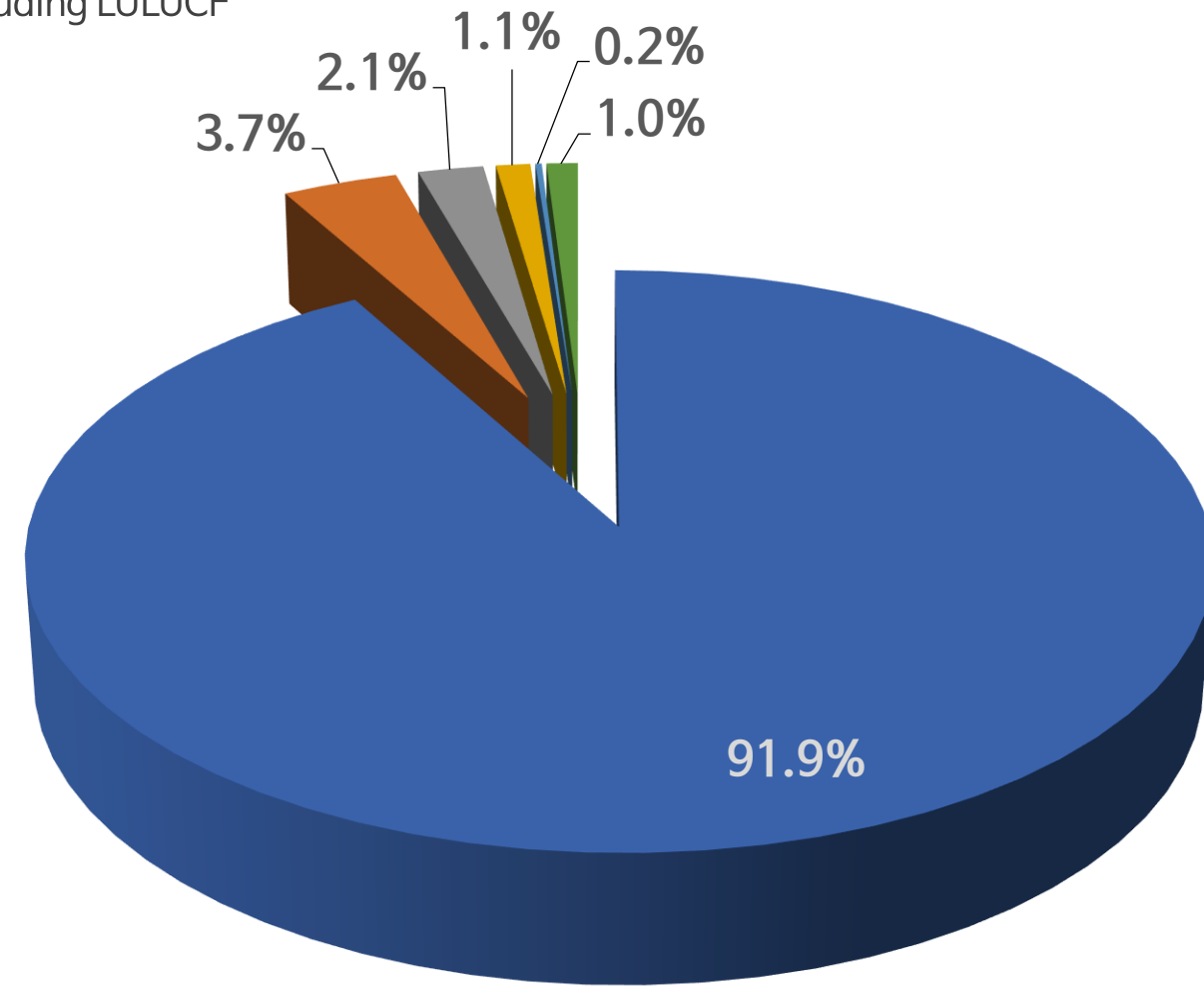


GHG Emissions by Gas and Sector

(2016)

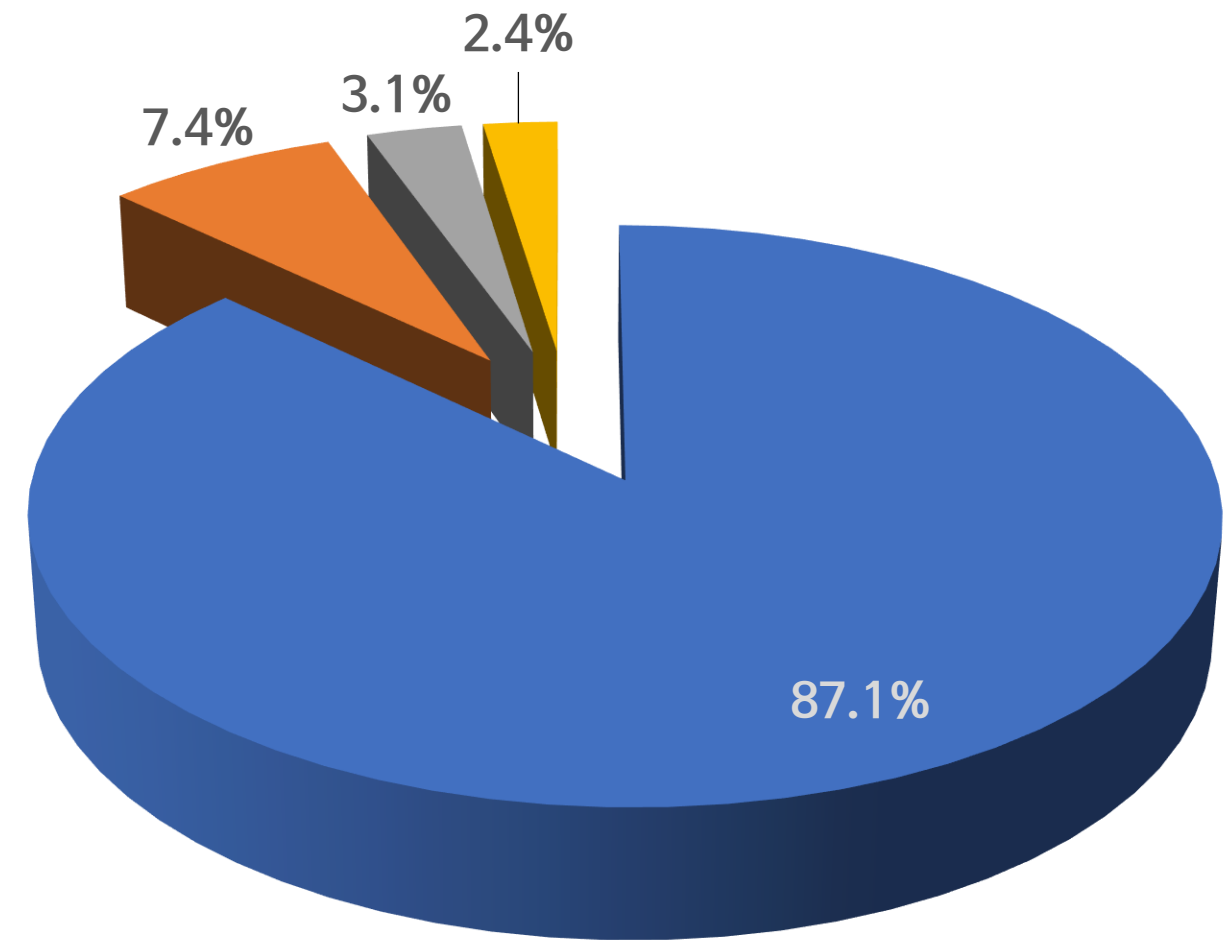
by Gas

* Excluding LULUCF



by Sector

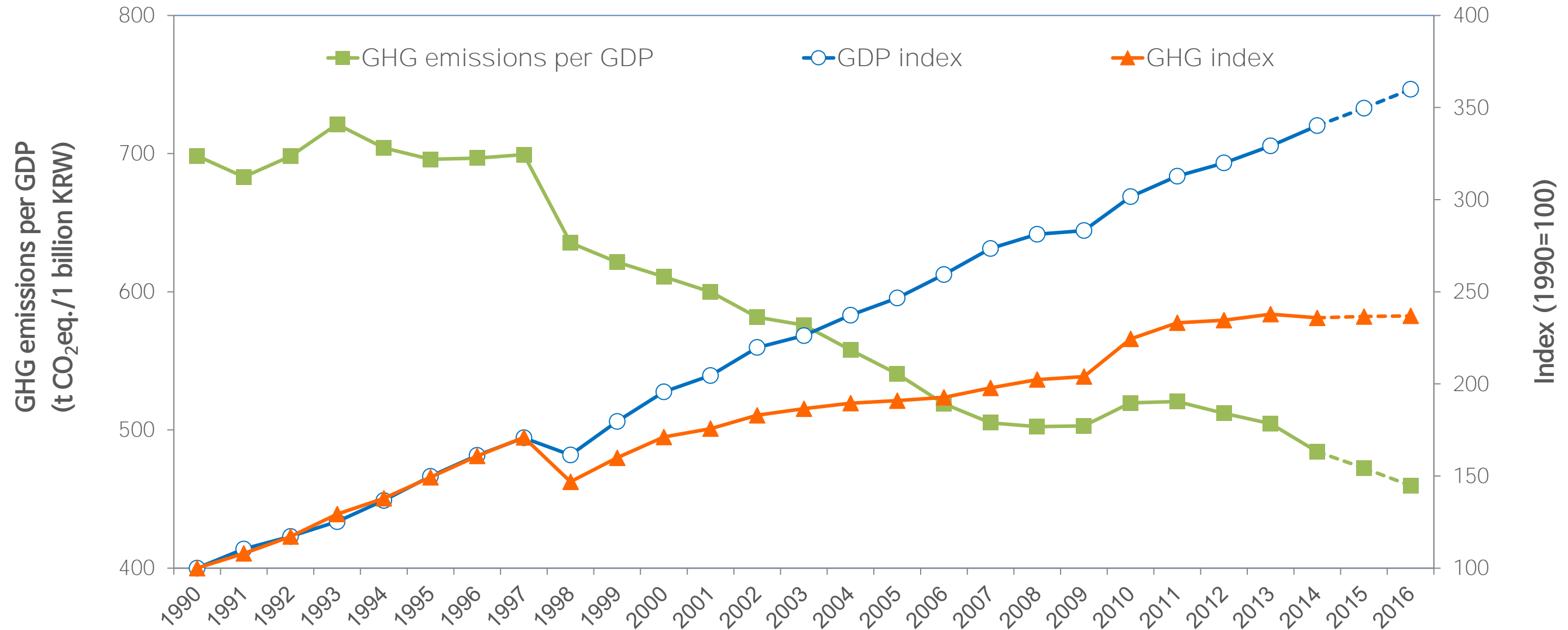
* Excluding LULUCF



■ CO₂ ■ CH₄ ■ N₂O ■ HFCs ■ PFCs ■ SF₆

■ Energy ■ Industrial Processes ■ Agriculture ■ Waste

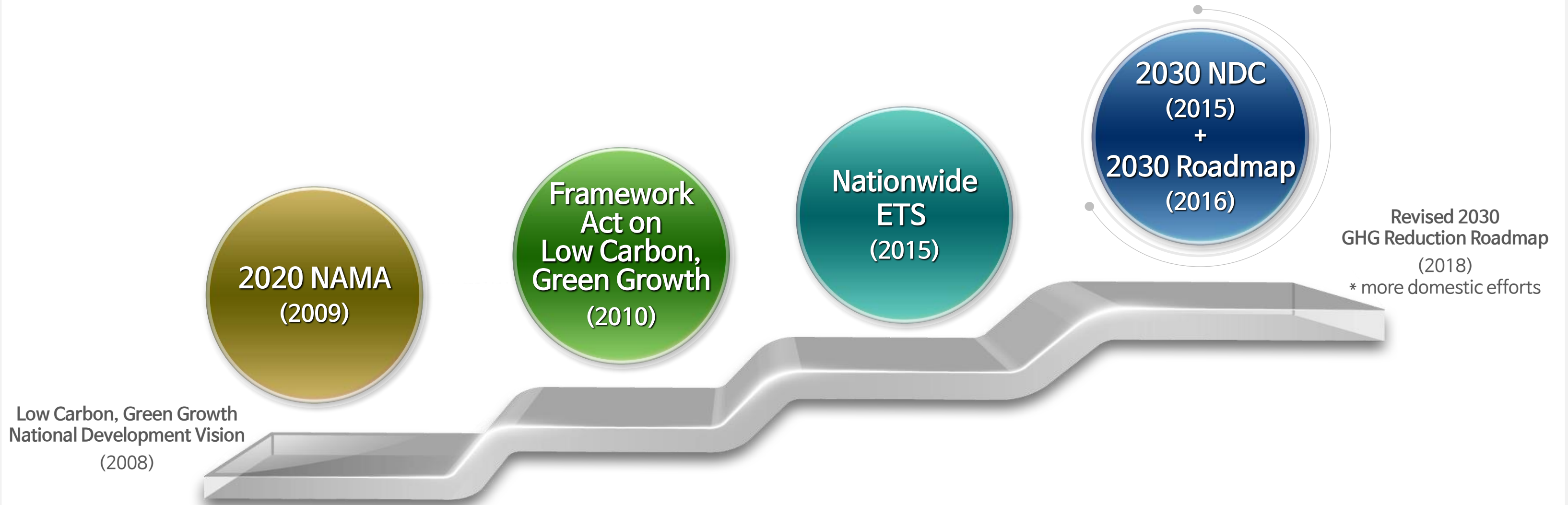
GDP* vs. GHG Emissions (1990-2016)



* Real GDP in 2010 KRW

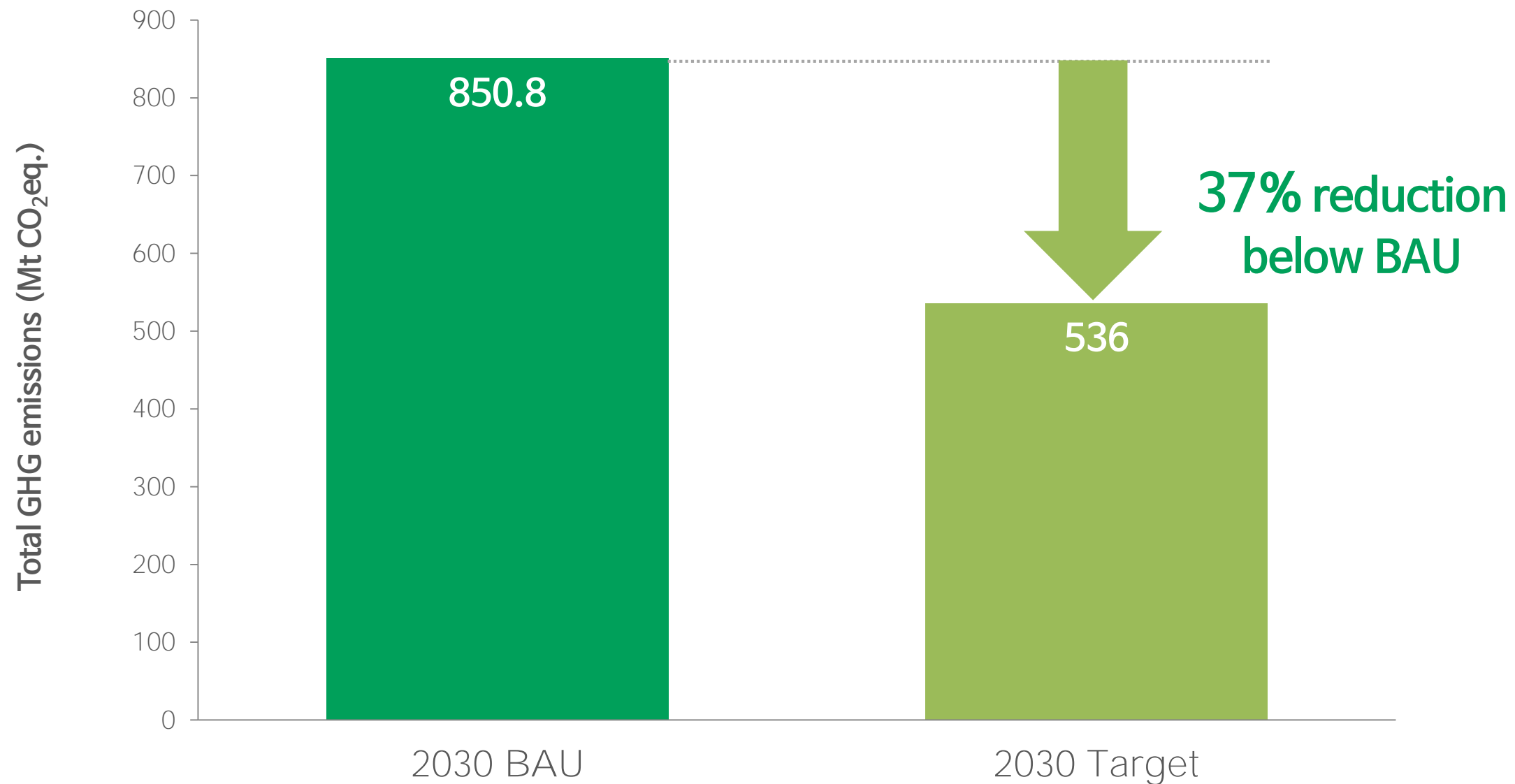
3. Mitigation Actions

Korea's Climate Milestones



3. Mitigation Actions

National GHG Reduction Target

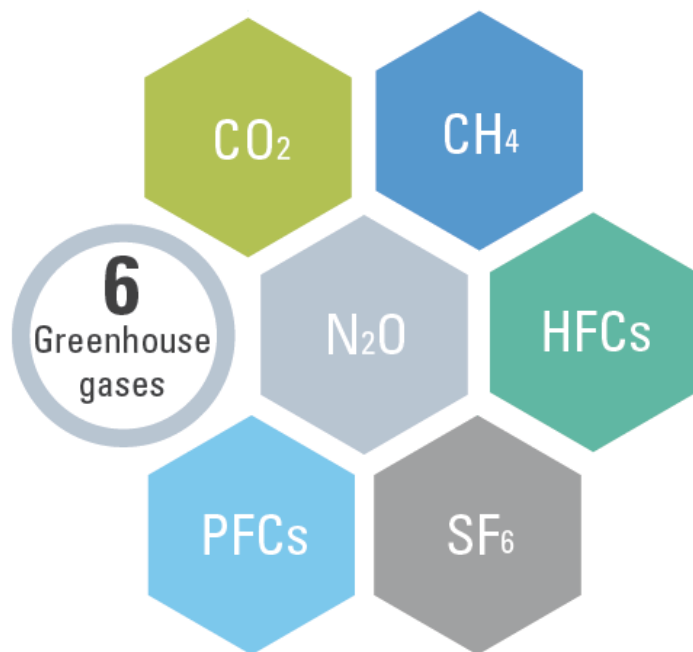


3. Mitigation Actions

Korean Emissions Trading System

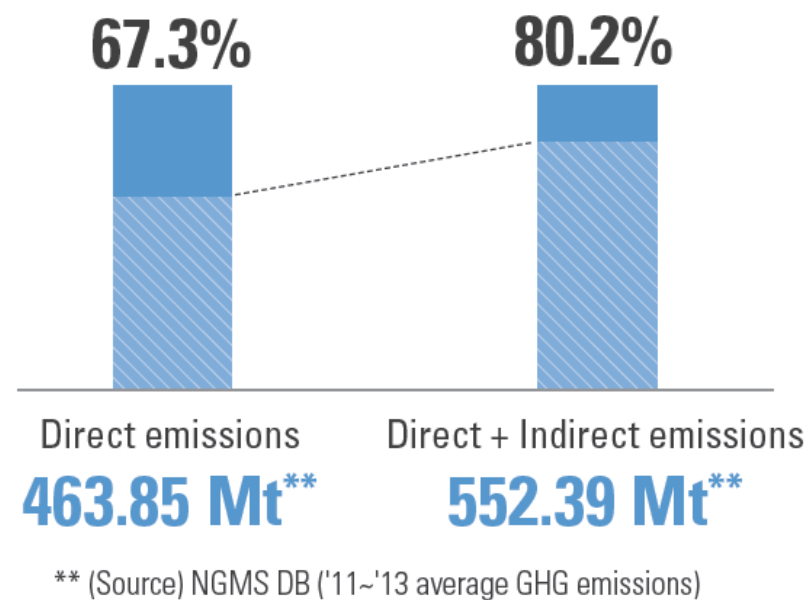
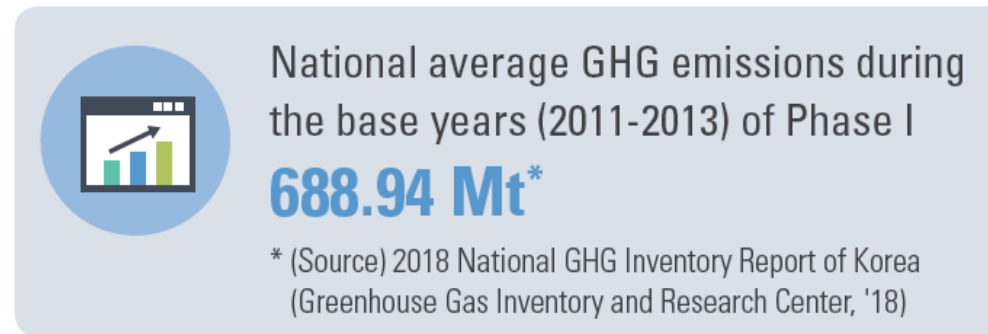
The “**1st**” Nationwide ETS in East Asia

Gas coverage



- Direct emissions of 6 greenhouse gases
- Indirect emissions from electricity consumption

Emissions coverage



Sectors & thresholds



Total yearly average GHG emission during the three years preceding a phase



Number of liable entities per compliance year

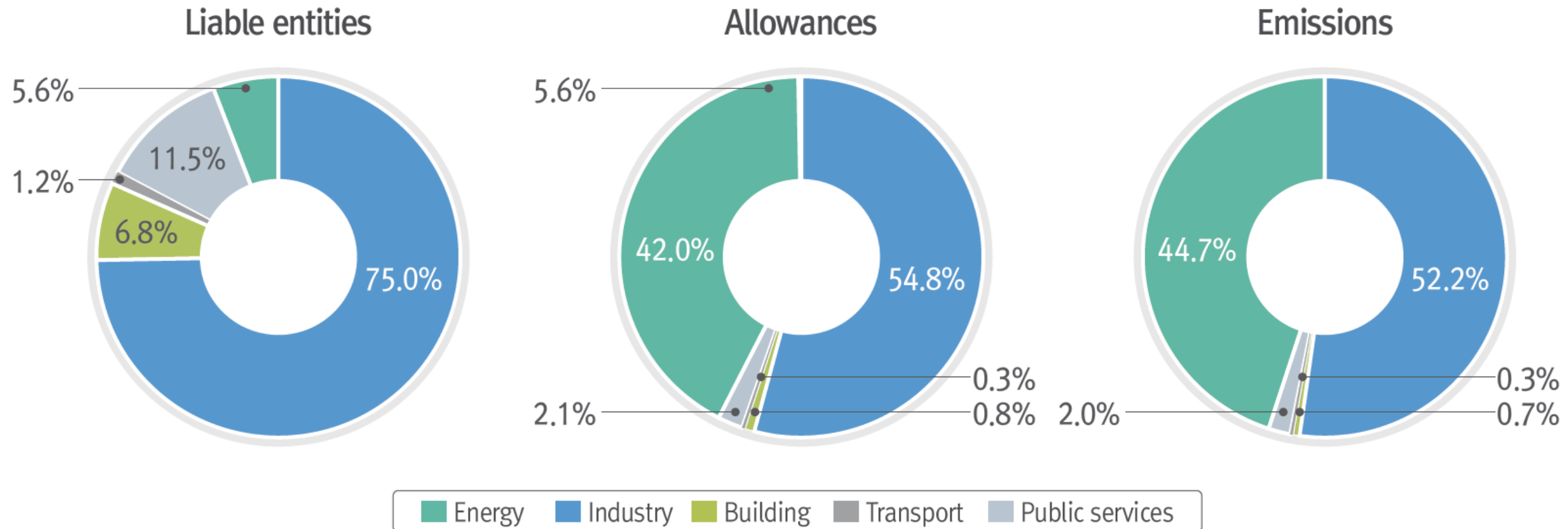


3. Mitigation Actions

Korean Emissions Trading System

Distribution by sector

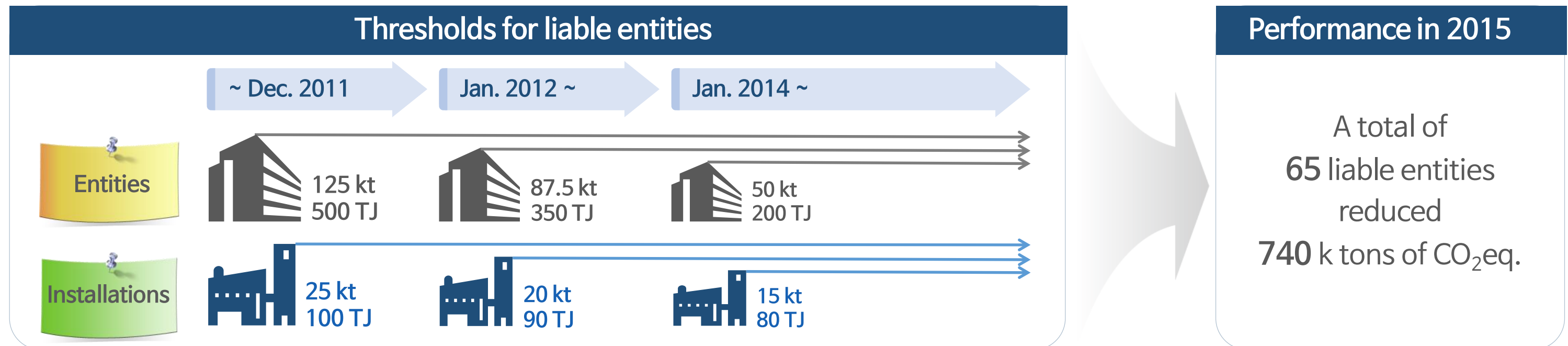
※ As of 2017



3. Mitigation Actions

GHG and Energy Target Management System

- Started from 2012 to meet the national mid-term GHG Reduction Target as **a precursor of the K-ETS**
- Manages GHG emissions or energy consumption of business entities that are **not covered in the K-ETS**
 - business entities (or facilities) whose annual average GHG emissions or energy consumption exceed 50 kt (15 kt) or 200 TJ (80 TJ) respectively



3. Mitigation Actions

Policies and Measures by Sector



Energy transformation

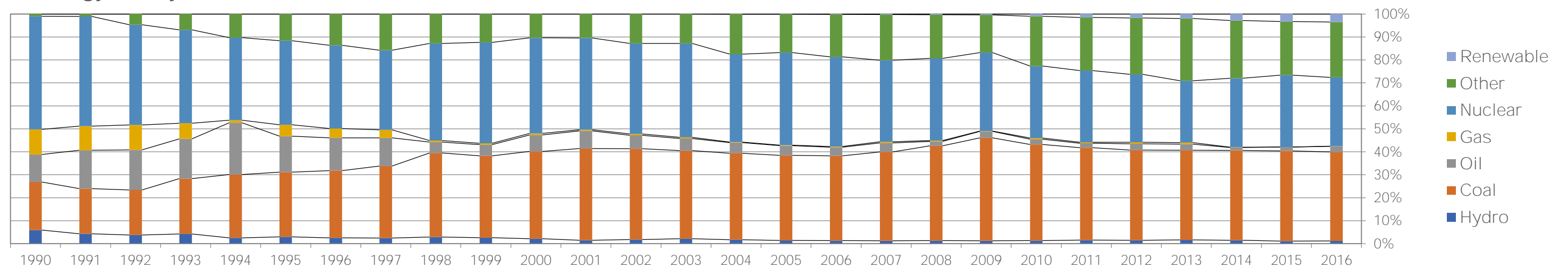
- Low-carbon power mix
- Renewable Portfolio Standard (RPS)
- Integrated energy system

► RPS implementation results

Type \ Year	2013	2014	2015
Mandatory supply rate	2.5%	3.0%	3.0%
Target (REC)	10,896,557	12,905,431	13,838,637
Implementation (REC)	7,324,861	10,078,351	12,486,461
Implementation / Target	67.2%	78.1%	90.2%

* REC: power generated from renewable sources (1MW) × weight for each energy source

► Energy mix by source



Policies and Measures by Sector



- Energy audit system
- Consultation on energy use plan
- Investment support and tax benefit for energy efficient facilities
- Expansion of energy service company (ESCO)

- Energy efficiency standard & labeling program
- Standby power warning indication system
- High efficiency energy equipment certification



- Energy performance standards
- Energy efficiency grade certification
- Zero-energy building certification
- Green remodeling

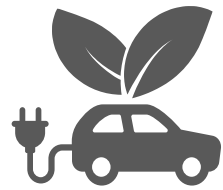
▶ Results of green remodeling projects

(Unit: number of cases)

Type		Year			
		2014	2015	2016	Total
Interest subsidy program for private sector		352	2,753	7,742	10,847
Public sector	Construction assistance	4	5	3	12
	Technology assistance	7	26	10	43

3. Mitigation Actions

Policies and Measures by Sector



Transport

- Expansion of public transportation
- Distribution of eco-friendly vehicles
- Biodiesel blending in road transport
- Vehicle Average fuel efficiency mgt.

► Average GHG emission and fuel efficiency standards of domestic vehicles (2015-2020)

Type \ Year	2015	2016	2017	2018	2019	2020
Average fuel efficiency standards of new vehicles (km/L)	17	18.4	19.9	21.3	22.8	24.3
Average GHG emission standards of new vehicles (g/km)	140	127	123	120	110	97



Waste

- Recycling municipal/industrial waste and reducing waste disposal in landfill
- Methane gas recovery in landfills

► Waste recycling rates (%) and methane gas recovery (k tons)

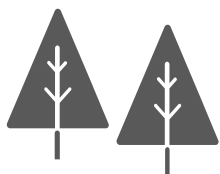
Type \ Year	2011	2012	2013	2014	2015
Municipal waste recycling rate	59.1	59.1	59.1	59.0	59.2
Industrial waste recycling rate	73.0	76.5	75.4	77.3	78.2
Methane recovered from landfills	139	153	153	142	-

Policies and Measures by Sector



Agriculture, Livestock and Fishery

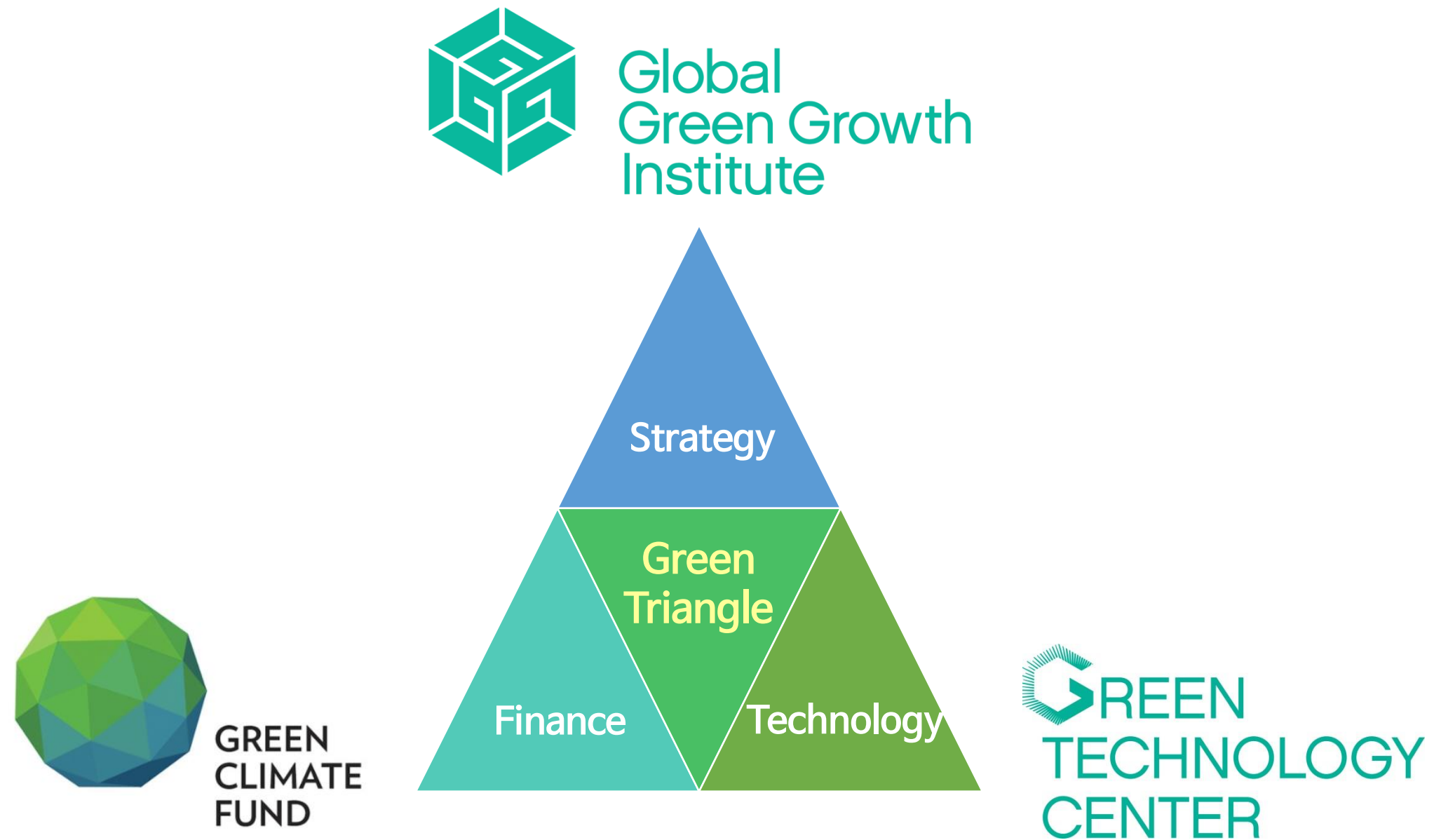
- Expansion of new & renewable energy facility
- Expansion of intermittent irrigation in rice cropland
- Expansion of livestock manure treatment facility
- High-efficiency fuel-saving equipment of fishing ships
- High quality forage cultivation
- Reduction in chemical fertilizer use
- Supply of energy reduction facilities



Forestry

- Sustainable forest management
- Establishment of new sinks (urban forests)
- Utilization of domestic wood
- Utilization of forest biomass energy
- Forest carbon offset scheme
- National forest fire prevention

Korea's Support Framework



4. Int'l Support & Cooperation

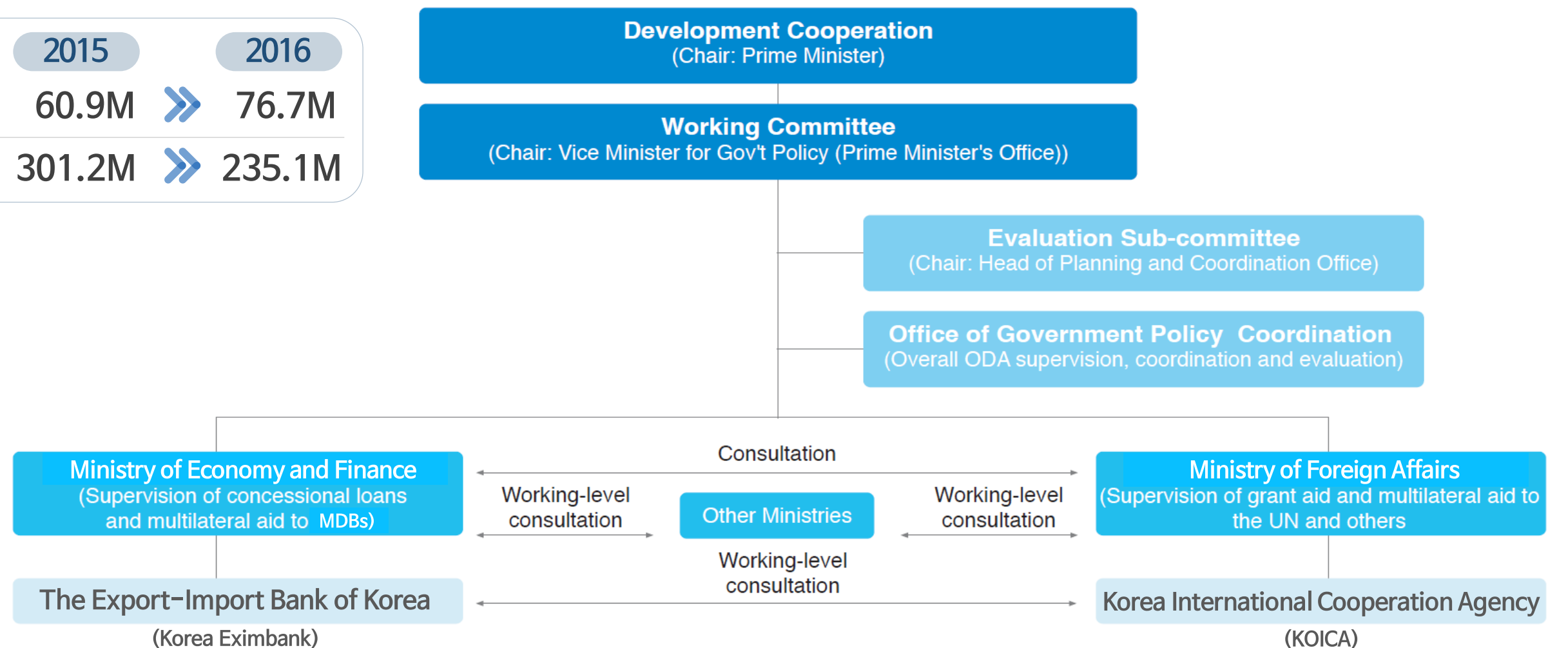
Finance

- Initial funds for the Green Climate Fund (GCF): **USD 100 million**
- Yearly contribution to the Global Green Growth Institute (GGGI): **USD 10 million**
- Climate Related Official Development Assistance (ODA):

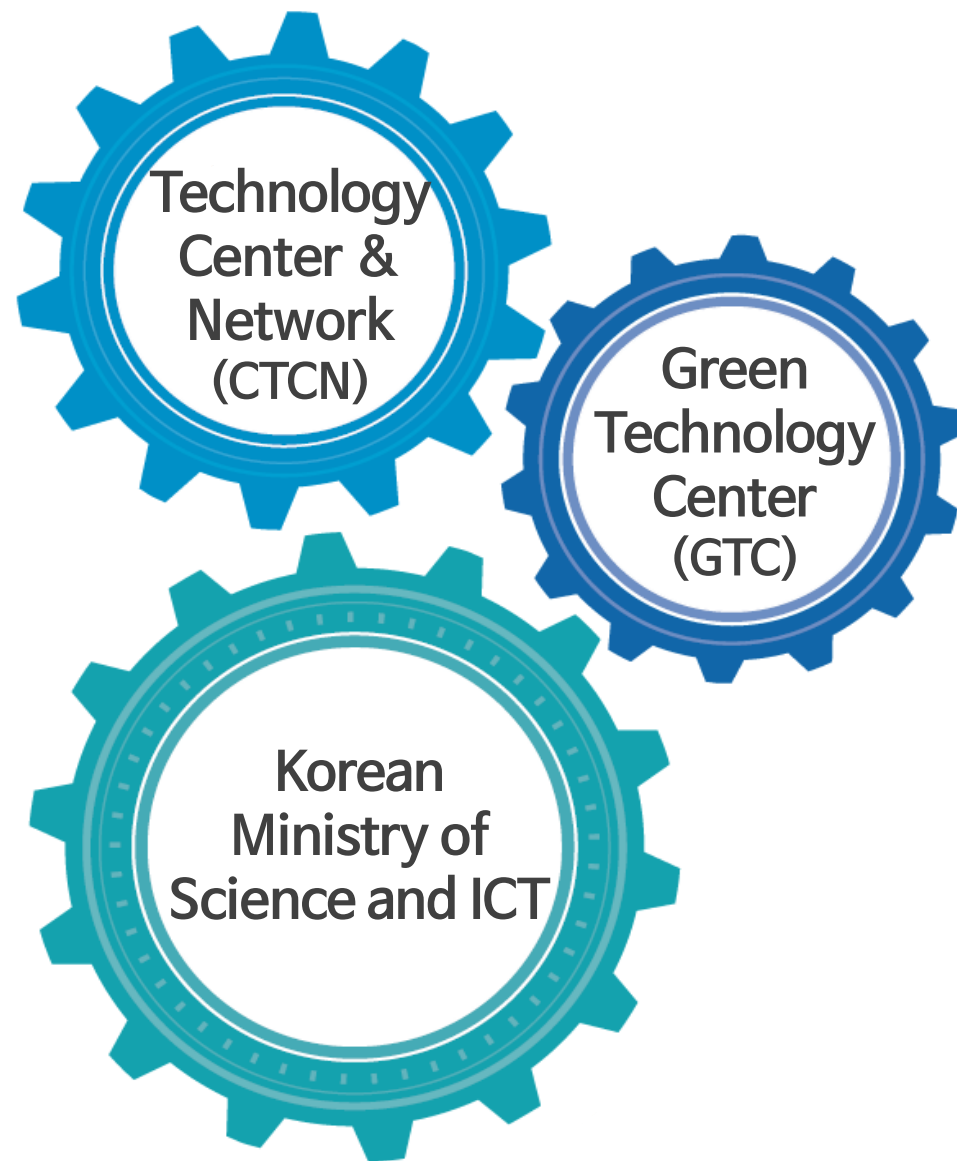


(USD)	2014	2015	2016
Multilateral	36.7M	60.9M	76.7M
Bilateral, etc.	69.3M	301.2M	235.1M

ODA Implementing Arrangements



Technology Development and Transfer



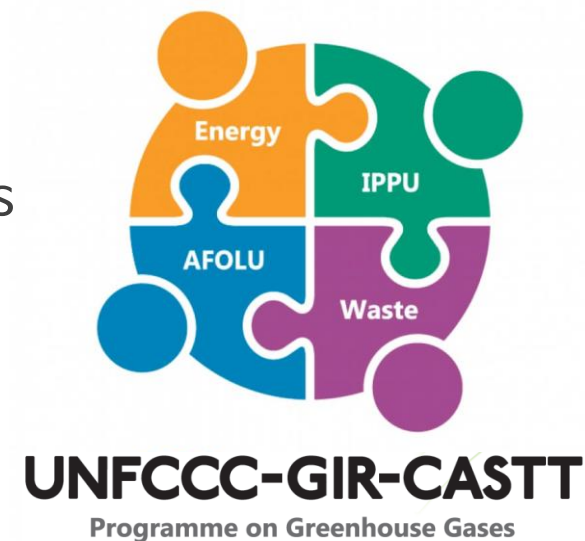
- **System preparation** for global climate technology cooperation under the Technology Mechanism till 2015
 - Ministry of Science and ICT designated as a **National Designated Entity (NDE)** for technology development and transfer
- **Facilitation of domestic and global cooperation**
 - Domestic awareness-raising
 - Global networking
- **Implementation** of technology assistance projects
- **Launch of climate technology cooperation** projects since 2017 (~USD 2.5 M)
- **Joint statement for financial contribution** (~USD 23 M) towards CTCN with 8 NDEs of developed countries

4. Int'l Support & Cooperation

Capacity Building

Greenhouse Gas Inventory & Research Center

- **UNFCCC-GIR-CASTT Programme on Greenhouse Gases**
4-week intensive professional training on GHG inventory compilation for national experts from developing countries



Ministry of Environment

- **Korea Global Adaptation Week 2019**
An international platform for experience-sharing and networking of various stakeholders, sectors and levels



NAP Expo 2019



Resilience Frontiers

Ministry of Economy and Finance

- **Seminar on Climate Change Projects and Programmes**
Introducing Korean policies and technologies regarding climate change to government officials from developing countries



Regional Technical Expert Meetings on Adaptation



2019 Adaptation Forum

Thank you



The Government of
the Republic of Korea