

GHG Targets Management Program

- IEA DSM -

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The Concept and Basic Directions

The concept and background



Presidential Declaration to actively participate in coping the world wide climate change, realize low carbon society through green growth

- Introduction of 'GHG target management program by **'Framework Act on Low Carbon, Green Growth'** which was entered into force in April 2010



An announcement of '2030'

- **30% reduction of GHG emission in 2020 against BAU**

- Set the GHG reduction target by sector, which considers a cost effective reduction measures(regulation/incentive) and international competitiveness of industry

※ the highest level with the recommendations to developing countries by IPCC(15~30% reduction against BAU)

Framework Act on Low Carbon, Green Growth

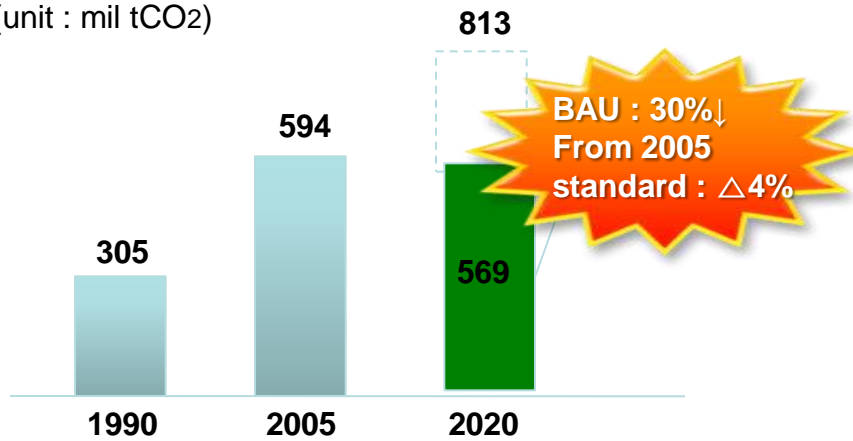
- is the legal background for the promotion of LCGG
- National Strategy for Green Growth
 - Policy Goal, Implementation strategy, Major tasks
- Establishment of Presidential Committee on GG
 - Headed by Prime Minister & Civilian Co-chair
 - includes related Ministers
- Master Plan for Climate Change and Energy
 - Mid-term target for GHG emission reduction and energy saving
 - Demand side energy management and secure energy supply

National Goal of GHG Emission Reduction by 2020

30% reduction against 2020 Business As Usual(BAU)('09.11)

<GHG emissions BAU and reduction goal>

(unit : mil tCO₂)



Major reduction means,

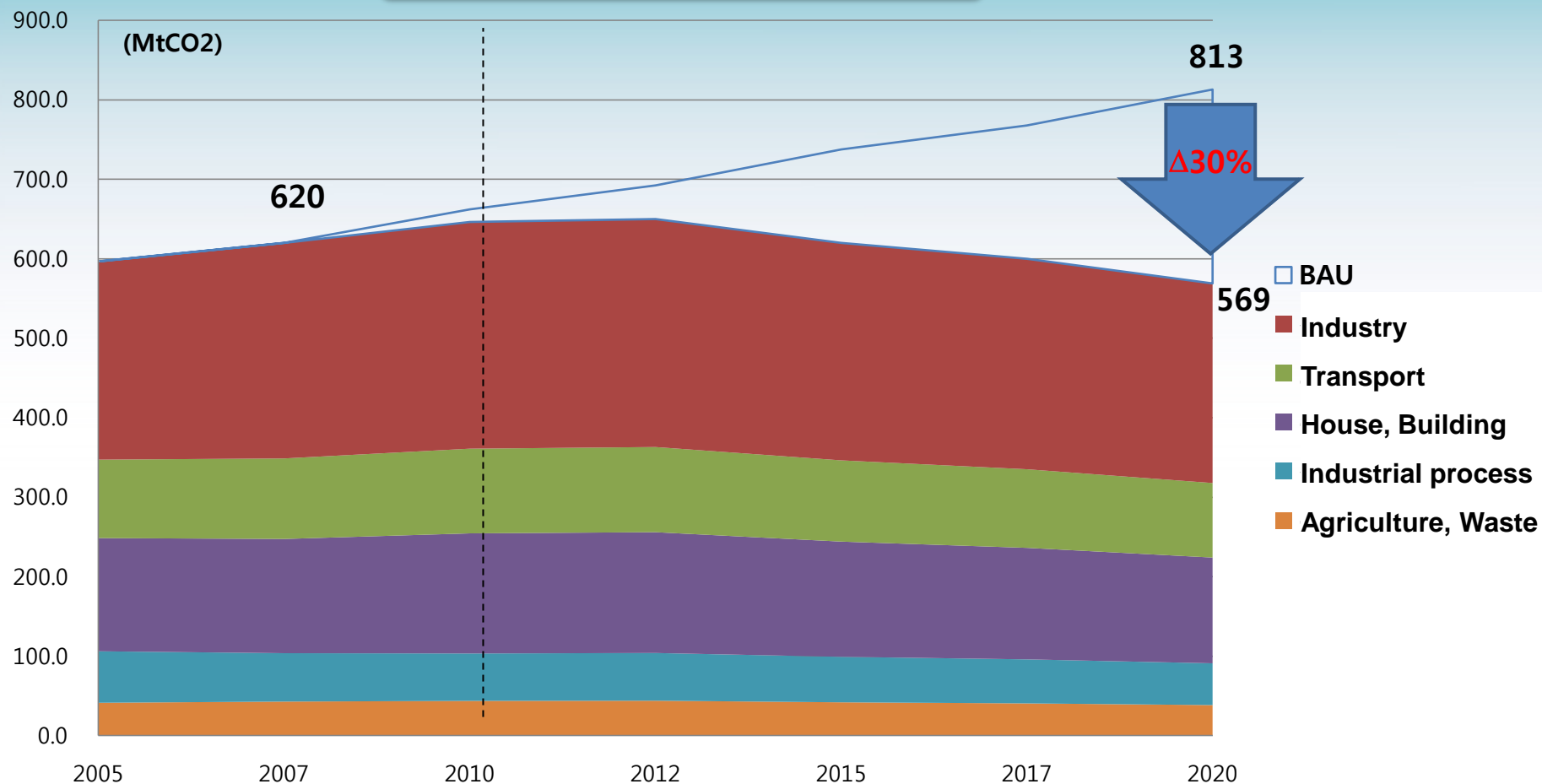
- increase of **new renewable energy** like GreenHome,
- dissemination of **high-efficient items** like LED,
- dissemination of **GreenCar**(electric vehicle, fuel cell vehicle),
- introduction of **CCS**(Carbon Capture and Storage)

The Government sets up **emission allowance for each sector** and implements **'Target for GHG emission reduction and energy savings'** program consideration of cost-effective policies (regulation/incentive), global competitiveness of the industry and investment plans('10~)

Implementation of national mid-term target,2020

- Introduction of mandatory GHG target management program and stimulation of voluntary emission reduction activities in small-, medium- companies

GHG outlook to 2020



Historical GHG Emissions from energy

(unit : mil tCO₂, %)

Sector	'90	'95	'00	'05	'06	increase rate	'07	increase rate	increase rate ('90~'07)
Power Generation	37.9 (15.9)	83.0 (22.6)	125.7 (29.1)	170.8 (34.8)	179.3 (36.1)	5.0	189.8 (36.8)	5.9	9.9
Industry	87.2 (36.5)	132.8 (36.2)	152.4 (35.3)	156.2 (31.8)	157.5 (31.7)	0.9	167.2 (32.4)	6.1	3.9
Transportation	42.2 (17.7)	76.7 (20.9)	86.6 (20.0)	97.5 (19.9)	99.3 (20.0)	1.8	100.2 (19.4)	0.9	5.2
Household, commercial	64.7 (27.1)	69.7 (19.0)	63.5 (14.7)	61.1 (12.5)	56.7 (11.4)	-7.2	54.5 (10.6)	-4.0	-1.0
Public service	7.0 (2.9)	4.6 (1.3)	4.0 (0.9)	4.9 (1.0)	4.3 (0.9)	-12.8	4.5 (0.9)	1.2	-2.5
Total	239.0	366.9	432.2	490.5	497.1	1.3	525	3.8	4.6

source) Ministry of Knowledge Economy



GHG Targets Management Program

Key points of enforcement decree of the Act

Competent Authorities of each sector, comprehensively inspected by MOE

- Designation of participants, Setting of emission permission, Evaluation of performance, Enforcement notice
 - **Competent Authorities of Each Sector**
 - **Industry and power** (Ministry of Knowledge Economy),
 - Building, Transportation (Ministry of Land, Transportation and Maritime Affairs),
 - Wastes (Ministry of Environment),
 - Agriculture, Livestock (Ministry for Food, Agriculture, Forestry and Fisheries)
- MOE establishes related guidelines and act as overall inspector.

Principles

Promotion of Green Growth

- Meet the national mid-term GHG reduction goal ('2030')
 - Promotion of green industry, economic growth
 - considering the business condition
 - coping the world wide movement to climate change issue
 - considering the energy security
 - integrated management of GHG and energy


Role of Ministries

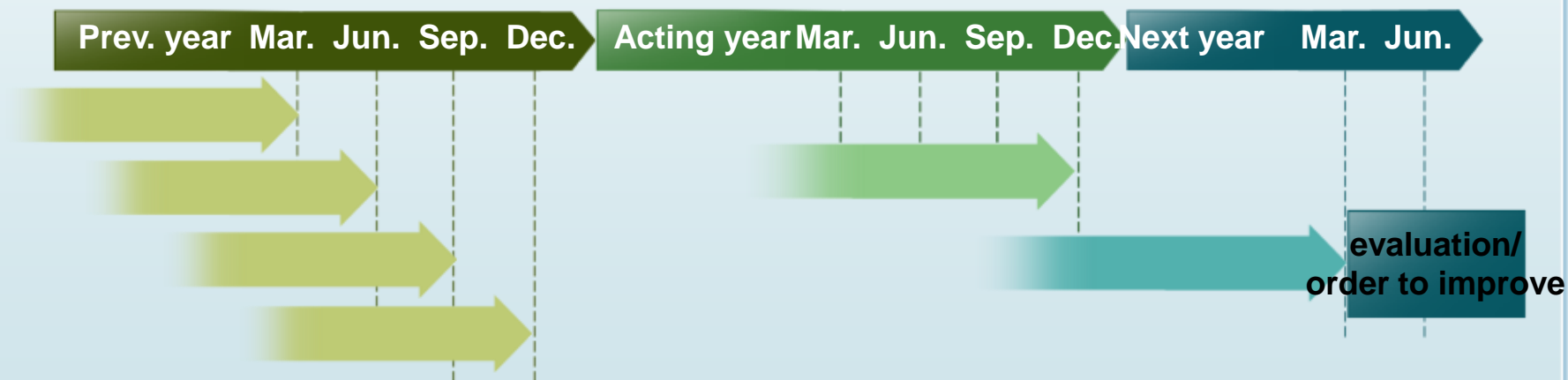
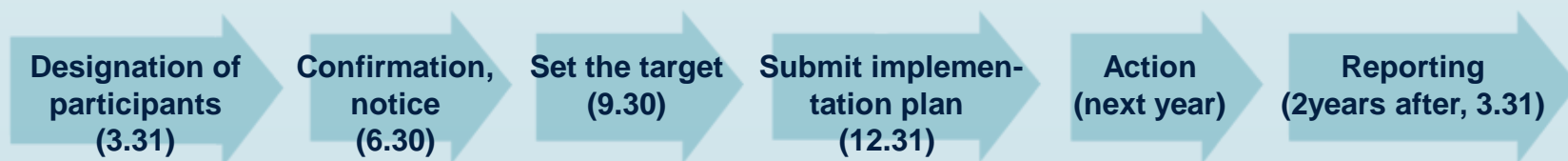
Leaded by Ministry of Environment

- establishment of guideline, procedure
 - overall inspection to each sector's competent authority
 - accreditation of verification body
- Each sector's Competent Authority (Ministry)
- designation of participants in the sector
 - setting the target (emission permission)
 - evaluation of the result of emission reduction actions

Timeline of the program

procedure

- 
- ① **Setting the emission permission by negotiation between government and the participants**
 - ② **The participants submit a implementation plan**
 - ③ **GHG emission reporting after one year**
 - ④ **evaluation of the result by government**



Scale of Participation

Designated by entity level or workplace level

- Baseline of recent 3 year GHG emissions

	level	GHG(tCO ₂)	Energy(TJ)
2010	entity	125,000	500
	workplace	25,000	100

2012	entity	87,500	350
	workplace	20,000	90

2014	entity	50,000	200
	workplace	15,000	80

Inventory includes scope 2 emission (electricity and steam from out of site), and office buildings and mobile emission sources.

Note) 1 TJ = 23.8846 toe
 : 100 TJ = 2,388 toe,
 1 toe ≈ 3.2 tCO₂

Number of participants

Designation of 471 participants in 2010

- On the basis of base year energy consumption, GHG emissions of energy intensive enterprises

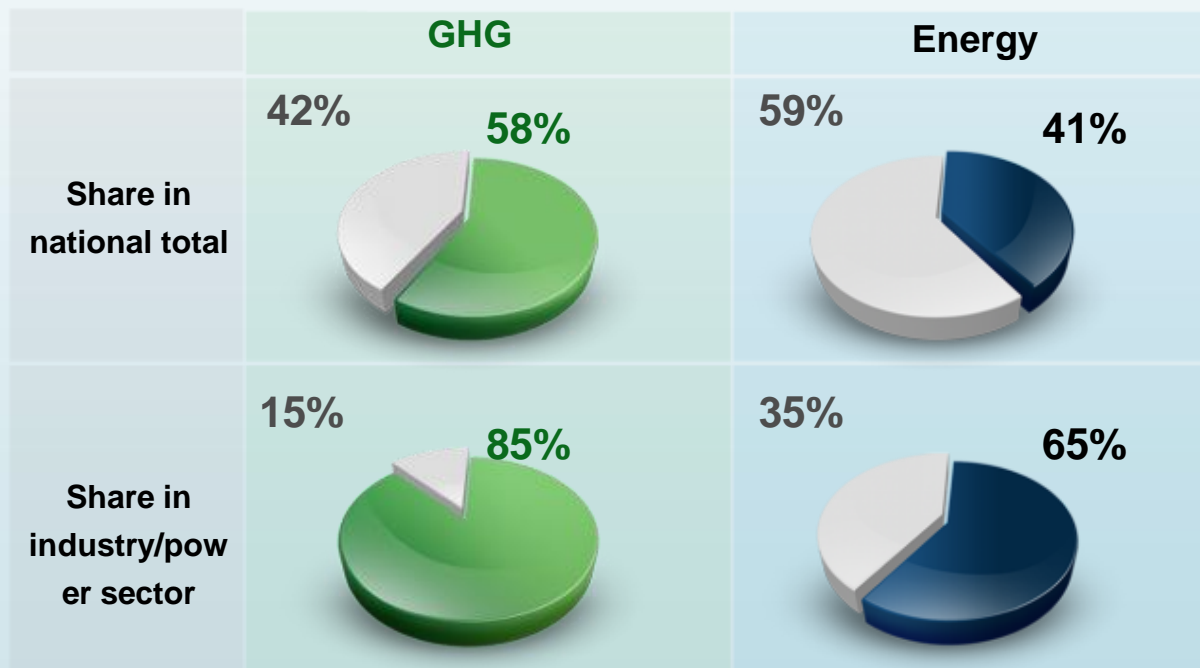
	Industry, Power	Building, Transportation	Agriculture, Livestock	Waste	Total
No.	378	45	27	21	471
%	80.3	9.5	5.7	4.5	100

Coverage of the program

Participants' GHG emission **360mil.tCO₂**, Energy consumption **4,080TJ**, **58.1%** and **40.5%** of the national total

- National GHG emission 620mil.tCO₂(2007), energy consumption 10.082mil.TJ(2008)
- Industry/Power sector 424mil.tCO₂(2007), energy consumption 6.311mil.TJ(2008)
 - **84.9%** in total GHG emission, **64.6%** in energy consumption in industry/power

<Share of participants of industry/power sector >



Setting the GHG emission permission

Emission permission will be set on the base of 2020 national mid-term goal.
The characteristics of individual participant might be considered.

Principles of Operation

- Consistent with the national mid-term goal
- Considering early action and offsets
- Government set the allocation rule with the discussion with the participants
- Fixed target and intensity target (power sector) are considered
- Includes 6 Kyoto Protocol gases

Verification and Operation

MOE is the accreditation authority of the verification body.

***KEMCO is the designated operating agency for industry/power and building sector.**

Verification body

- Designated by MOE through the discussions with each sector's competent authorities(Ministries)

Role of operating agency

- Review the implementation plans
- Set the permission with negotiation
- Confirm the past GHG emission
- Develops relevant guidelines
- Registration and management of performance

Penalties

The Competent Authorities of each sector evaluate the performance and take necessary measures including enforcement notice. Participants should reflect the improvements in their new implementation plans if receive enforcement notice.

<Penalties>	<KRWon>
violation	penalty
1. Failed to report by article42-6 until the appointed date or submit a fake reports A. Delayed less than 1 month B. Delayed more than 1 month but less than 3 months C. Delayed more than 3 months D. Fake reporting	3 5 7 10
2. Failed to report by article42-9 until the appointed date or submit a fake reports A. Delayed less than 1 month B. Delayed more than 1 month but less than 3 months C. Delayed more than 3 months D. Fake reporting	3 5 7 10
3. Failed to report by article42-5 until the appointed date or submit a fake reports A. Delayed more than 1 month B. Delayed more than 1 months but less than 3 months C. Delayed more than 3 months D. Fake reporting	3 5 7 10
4. Failed to follow enforcement ordinance according to article42-8 A. 1 time violation B. 2 times violation C. More than 3 times violation	3 6 10
5. Failed to open publicly according to article42-9	10
6. Failed to carry out improvement or supplementation A. 1 time violation B. 2 times violation C. More than 3 times violation	3 6 10

Thank you

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