

Voluntary Carbon market for Public Sector in ROK

4.26

Lotte Hotel



Silla University
Professor k.s. Choi



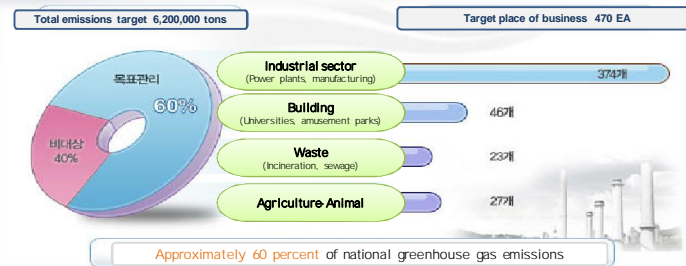
Low Carbon Strategy

- High Energy Cost
 - Existing plan & Measures Changed
 - linked with NAMA
 - carbon price : crucial in developing countries
- Developing low carbon infrastructure
 - covered with various areas :
 - for example : lack of activity data in local government
 - capacity building



1. Government control of GHG & Energy Consumed

- Target of GHG reduction is 30% from BAU projection for 2020.
- Businesses concerning emission of GHG are classified with 2 groups. (Entity at all its places of business for past 3 years, Entity's place)

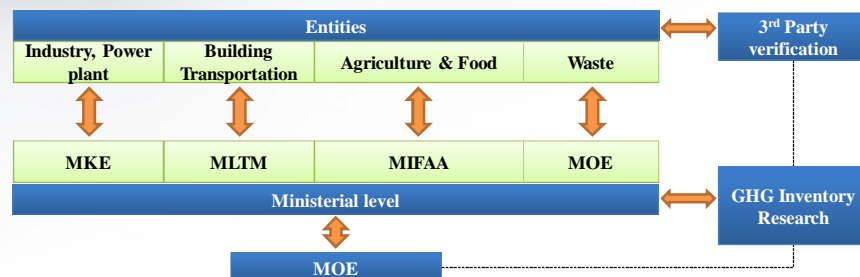


< Management as a company standard (Decree Article 29 Paragraph 1) >

	2011.12.31		From 2012.1.1		From 2014.1.1	
	Entity	Entity's place	Entity	Entity's place	Entity	Entity's place
Greenhouse gas (CO ₂ ton)	125,000	25,000	87,500	20,000	50,000	15,000
Energy Consumption	500	100	250	50	200	50

2. Operating and Management status.

- Allocation of target into entity, Supporting to achieve the target, Evaluation of implementation, Administrative action etc by each ministry as MRV manner

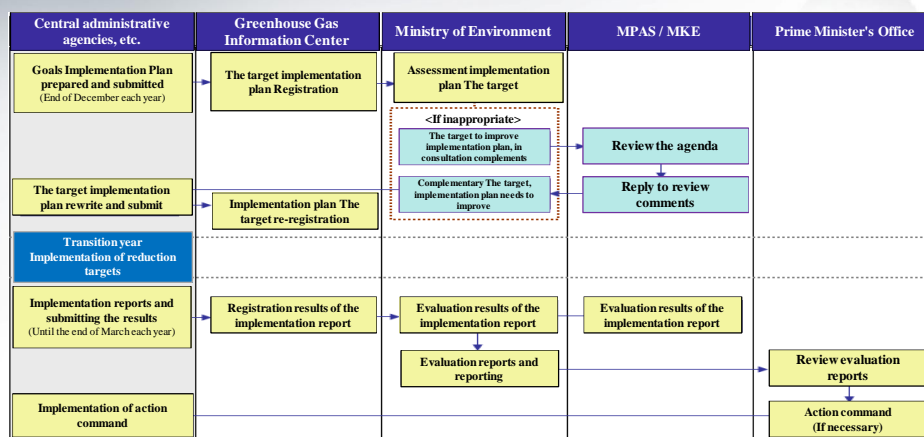


- 'Total entities' place 458 assigned in 2012
- Their emissions are 2/3 of total emission of the country

3. GHG-Energy Target management for public sector



Target : 20% reduction target based on average emission for past 3 years by 2015 year



< Load the targets management system of public sector >

4. Lists of public sector in GHG-Energy Target



774 organizations, including central government agencies.

Agency	Classification
1. Central government agencies (41)	National Audit Office, Prime Minister, including central government agencies
2. Metropolitan Local Government (16)	City, provinces including Seoul
3. The Local Government (228)	Each counties and boroughs
4. City, provinces education office in-local (16)	education office in-local, Each City.provinces
5. Public institutions (285)	Operation of public institutions in accordance with the law on public organizations
6. Local public Corporation and Local Agency (136)	Corporations and the province offices in accordance with the Local Public Enterprises Agency
7. National University Hospital, Dental Hospital. Seoul National University Hospital (12)	Establishment of National University Hospital and Seoul National University Hospital, according to the Establishment
8. National universities and public universities (52)	National universities and public universities

5. Potential reduction methods in public sector



© LED replacement for fluorescent existing public buildings

Classification	Policy measures	Reductions in GHG emissions (ton/yr)
Public Sector	Fluorescent of public institutions → LED Lamp replacement	If replacing ratio of LED is 1% -519 ton/yr

Power consumption of the public sector in 2006 (Mwh)	109,074
Lighting ratio(%)	36.7
Fluorescent ratio(%)	71.2
Fluorescent power consumption (Mwh)	28,501
LED lamp replacement power Savings (Mwh)	12,255
Reductions in GHG emissions (ton/yr)	5,196

* Source: Statistical Yearbook 2007/2008, public institutions LED lighting replacement, Korea Energy Management Corporation

© Low carbon cars supply expansion - Hybrid cars supply

Classification	Policy measures	GHG Reduction in 2013yr
Transport	Hybrid car supply	1.7 ton/yr reduction per a hybrid car

A total of 1,869 L (based on mileage 10.7km) - 1,069 L (based on mileage 18.7km) = 800L gasoline savings (1.7 CO₂ ton / yr)


© LED lamp replacement of traffic signal

Classification	Policy measures	GHG Reduction
The transport sector	LED lamp replacement of traffic signal	0.3 ton/yr per a LED lamp traffic signal

※ traffic signal use a lot of energy into improving the business promotion older incandescent lights be replaced with energy-saving LED lamps that light.

If the power consumption of incandescent bulbs, but 100W/hr consumption, LED lamps, the tenth of that 10W/hr have high energy efficiency.






© Planting

Classification	Policy measures	GHG Reduction in 2013yr
Land-use	1 planting per 1 person	2.8 kg yr absorbed a tree

ex) 100,000 citizens every year by a 10 years plan to conduct a tree planting campaign.
 ·Subsequent absorption of greenhouse gases expected to be effective.
 ·A year is usually around 2.8kg is well known that the absorption of 5,097 tons in 2013 / year is expected to be absorbed.



7. VER Complement system. (Carbon Offset Program)

- Voluntary Market ?
 - There is no mandatory obligation to reduce corporate, institutional, personal and social responsibility and sustainable development in terms of **voluntary** carbon credits for emission reduction (credit) markets to trade
- Voluntary greenhouse gas reduction to the voluntary offset credits issued through the verification.
 - : It can be managed for the **Standard** and the credit you need **Registry**

Reduction activities

Project Development

Emission Reduction

Verification



Units

PER

ER

VER

Examples

8. Limits of the potential reduction in public sector



Existed Voluntary Market in Korea

Industry : voluntary greenhouse gas reduction projects for KCER

Carbon Neutral Program(KEMCO) : Gangwon-province , Seoul (Register)
: Incheon



Problem : approve the early actions and budget limitations

Require the VER market and trading VER for the public sector

- MRV mitigation standards. Less strict than industry
- Support from the central government

Thank you

