International Partnership on Mitigation and MRV
”Transparency and Implementation-Future Proof Rules for International Climate Policy”

Green Growth
Climate Polices in Korea

- Focused on Emission Trading Scheme -

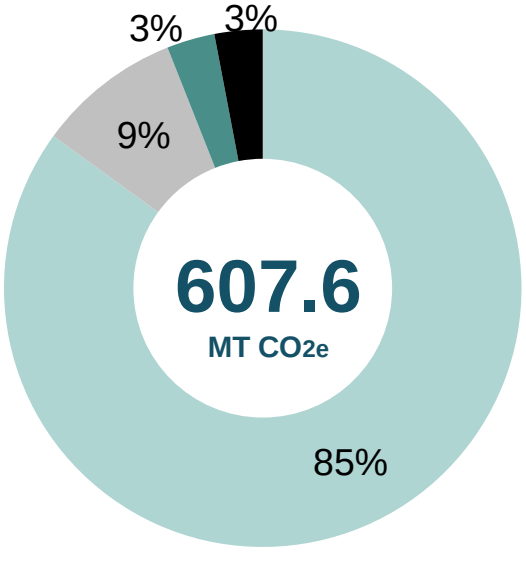
2015. 9. 11

Seohyeon Lee

Emission Trading Scheme

Overview of Korea's GHG emissions

Energy & Industrial Process – keys sectors for GHG emissions



GHG emissions by sector (2009)

- Energy
- Industrial Process
- Agriculture
- Waste

*** GHG emissions in 2012(NIR) : 688.3 MT CO2e**

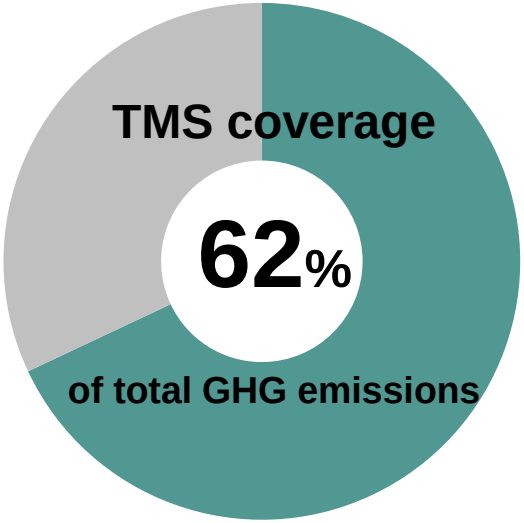
facts on Korea's energy consumption

- World's 10th largest energy consumer
- 97% of energy is imported from abroad
- Energy import account for 29% of Korea's total import volume

Roadmap : Major Mitigation Measures by Sector

Industry	△ Participation of large-emitters in ETS △ Fuel shift(Heavy Oil to LNG)
Transportation	△ Establish Intelligent Transportation System (ITS) △ Stricter GHG emission standard for vehicles
Building	△ Stricter license standard for new buildings △ Eco-friendly refurbishment of buildings
Public/Other	△ Introduce Target Management System △ Improve the efficiency of cooling, heating, lighting facilities
Agriculture/ Fishery	△ Distribute low-carbon technology in agriculture/ fishery sector, Improve the efficiency of energy-use
Waste	△ Enhance energy recovery from waste △ Promote the use of renewable energy for waste treatment facility
Electricity Generation	△ Overhaul energy pricing system, Strengthening Supply-Demand management

Target Management Scheme (TMS)

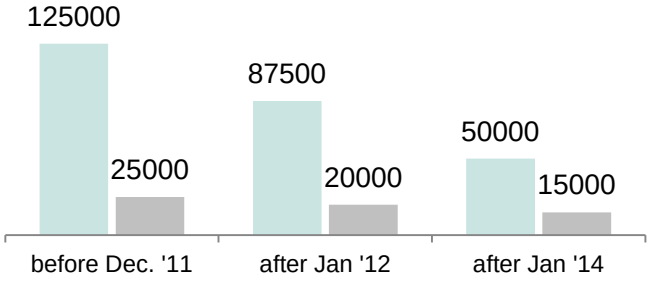


- **Launched in 2012**
- **TMS covers 62% of total GHG emissions**
- **490 entities designated at the end of 2011**

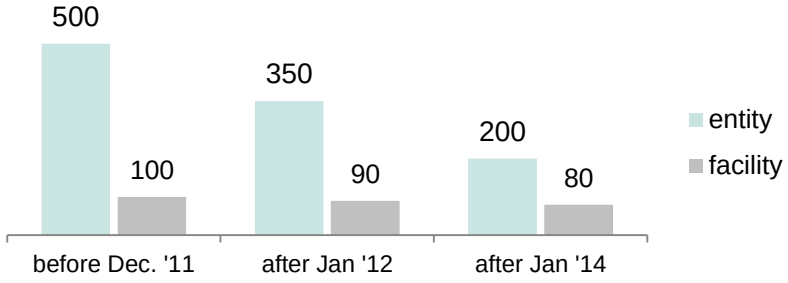
Power/Industry	Buildings	Waste facilities
412	51	27

- **Designation criteria**

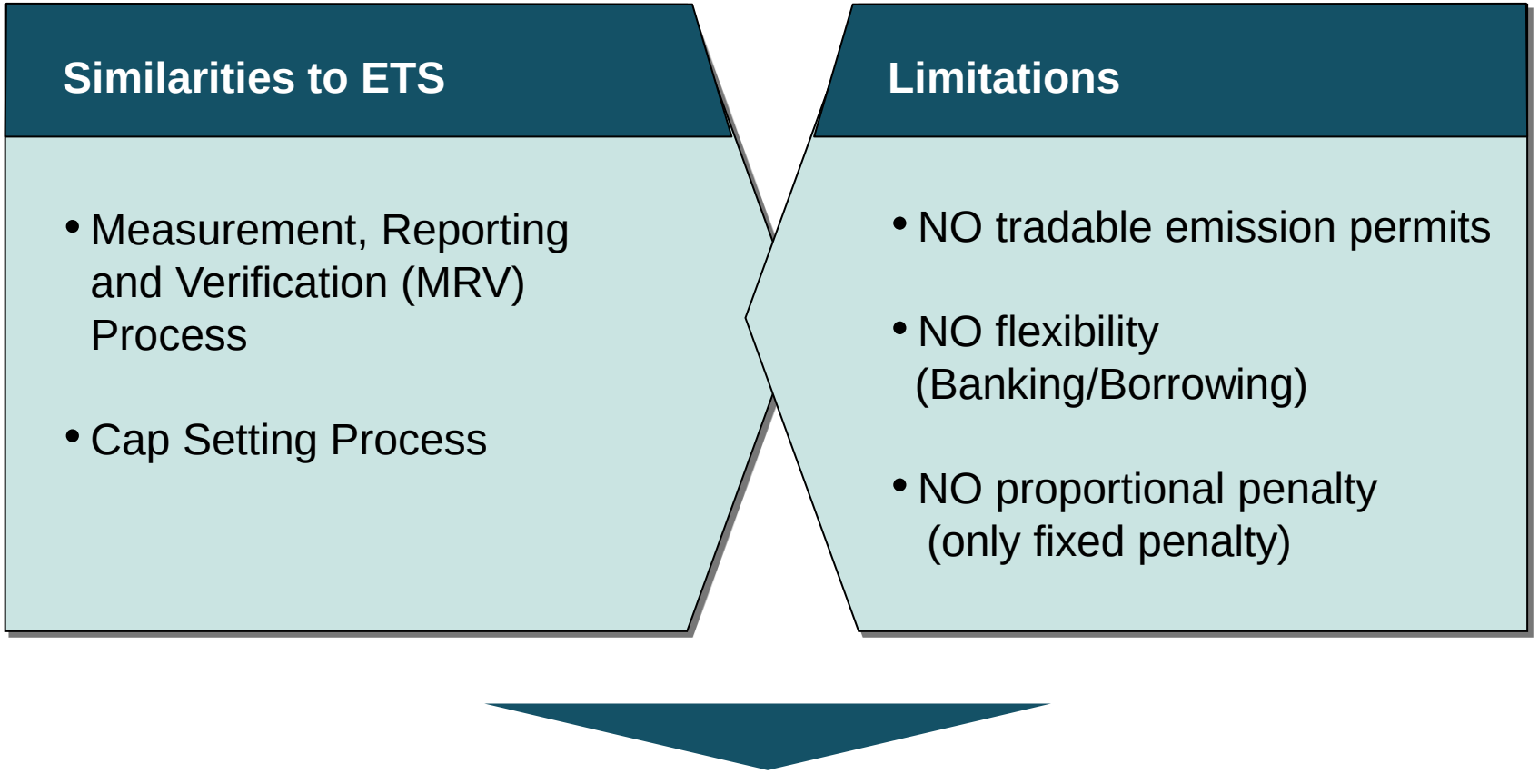
GHG emission criteria (CO_{2e} T)



Energy consumption criteria (terajoules)



Target Management Scheme (TMS)



- Led to the legislation of the **"Greenhouse Gas Emission Permit Allocation and Trade Act "** (Bipartisan support in the National Assembly)

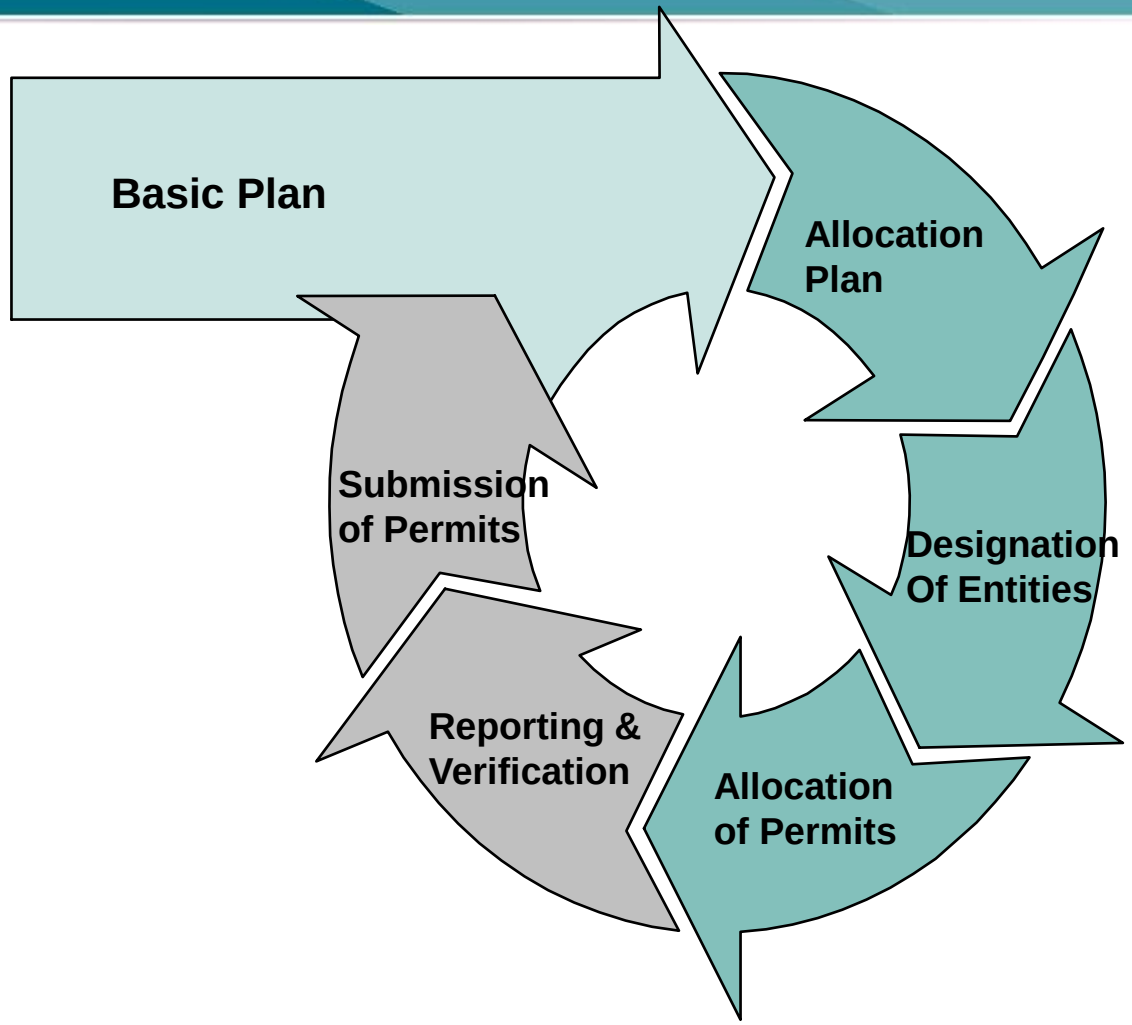
ETS (Key processes and legal plans)

Basic Plan

- 10 year plan
- Every 5 years
- Ministry of Strategy and Finance
- Policy direction for ETS, BAU forecast, economic impact assessment, etc.

Allocation Plan

- Every phase (3~5 yrs)
- Ministry of Environment
- ETS cap, Cap for each sector, Allocation methodology,
- Reviewed by the Allocation Committee



Timeline

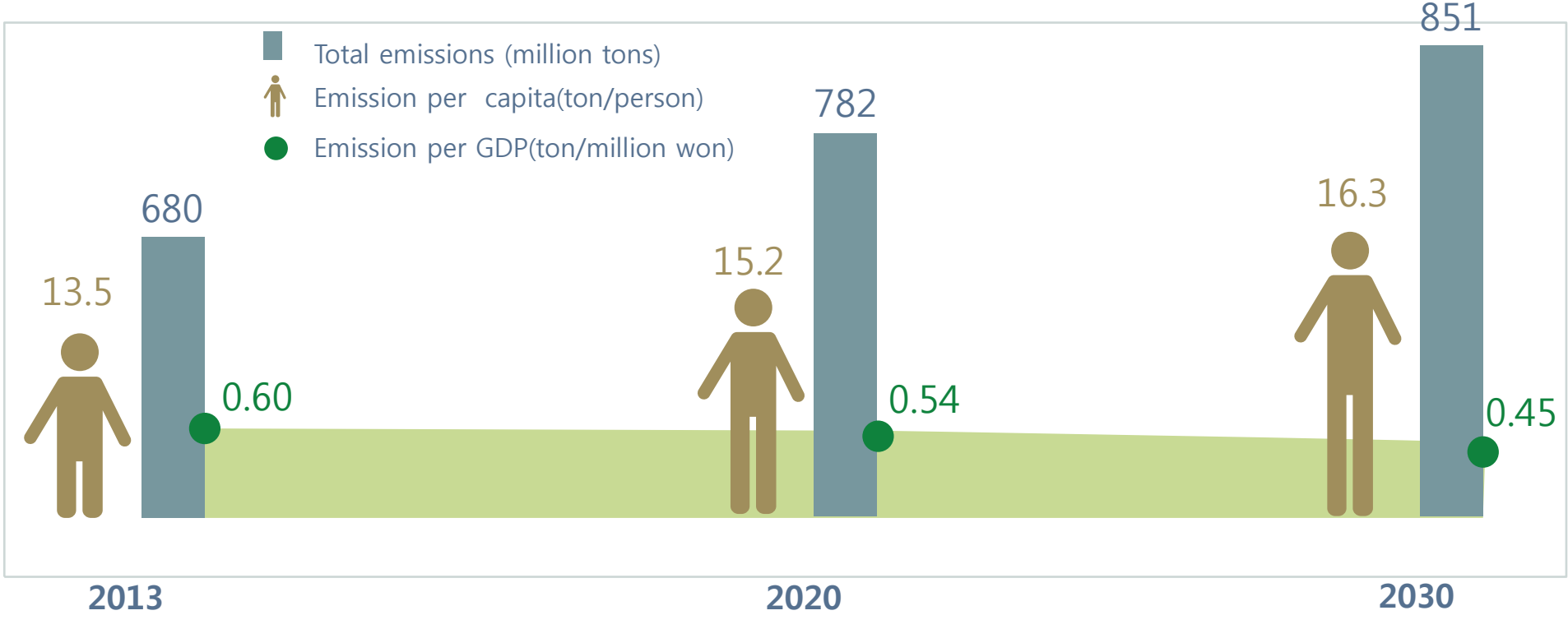
Application TMS 2010	Application TMS 2012	Application TMS 2014	Application ETS 2015
25,000 tCO_2	20,000 tCO_2	15,000 tCO_2	25,000 tCO_2
480 entities	580 entities	700-800 entities	500 entities

Post-2020 Mitigation Target

GHG Business As Usual(BAU)

Total Emissions

The emission projection for 2030 has increased to 851 million tons, annual average of 1.33%

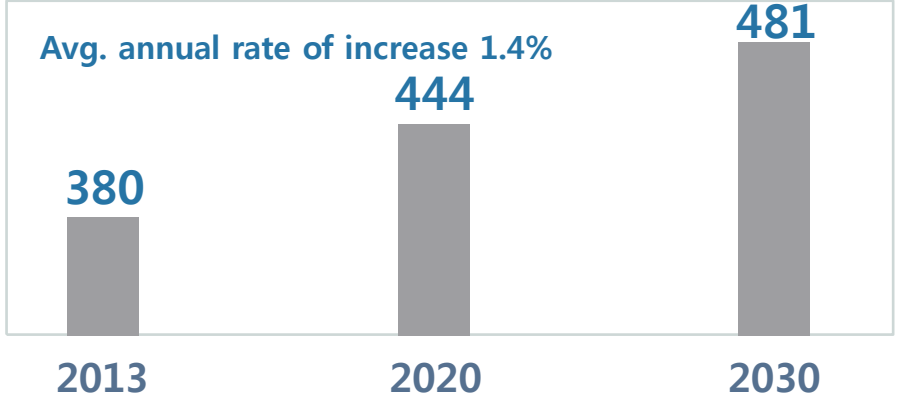


GHG Business As Usual(BAU)

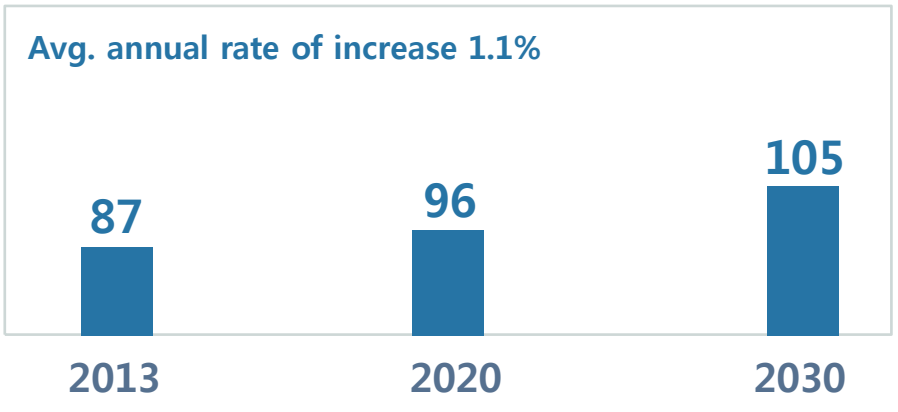
Emissions by Sector

Unit : million tons CO_2e

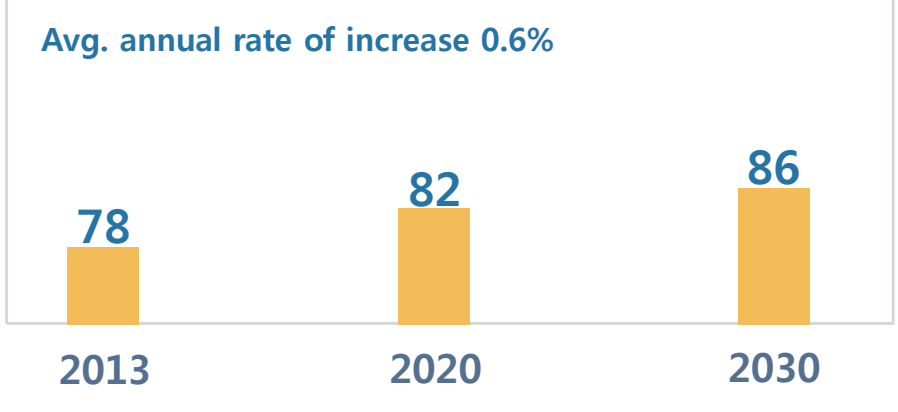
Industry



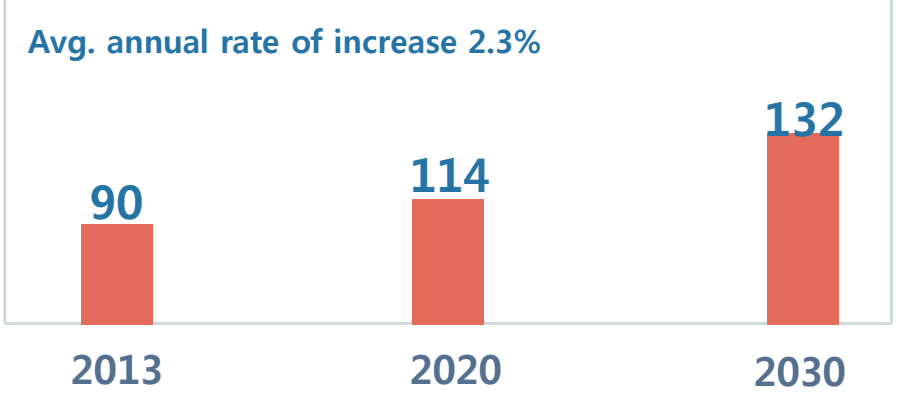
Transport



Household



Business · Public



Major GHG Reduction Means

Industry · Power Sector

- Enlarge dissemination of renewable energy
  → Adopt and commercialize CCS
  → Enlarge LNG devel -opment
- Adopt Factory Energy Management System (FEMS)
- Adopt eco-friendly fuel, new technology
  (ex: Optimize clean room process energy)
- Adopt decomposition equipment for Non-CO_2 such as SF_6 *

*Global warming effect of SF_6 is 23,9000 times greater than CO_2

Buildings Sector

- Enlarge dissemination of LED
- Enhance the efficiency of home · office appliances
- Enhance design criteria focusing on energy saving
- Building Energy Management System (BEMS) is adopted
- Enhance heat insulation

Transport Sector

- Enhance the standards of average fuel efficiency and GHG for cars
  - fuel efficiency : 17.0km/l or more in '15
    ⇒ 24.3km/l or more in '20
  - GHG : 140g/km or less in '15
    ⇒ 97g/km or less in '20
- Switch to low carbon transport mean
  - expand dissemination of green cars including hybrid· electronic · fuel cell vehicles
  - vitalize public transportation, improve rail road market share, enhance ECO-DRIVING etc.

Korea's INDC (Submitted on 30 June, 2015)

Mitigation Target

- Emission reduction by 37%(850.6 $MtCO_2$-eq.) from the BAU level

Adaptation

- 「National Climate Change Adaptation Plan」 (1st : '11~'15, 2nd : '16~'20)
- Basic adaptation plan by regional government ('15),
  Vulnerability and risk assessment tool development & distribution and etc.

Fairness and Ambition

- In line with the recommendations of the IPCC AR5 to reduce GHGs by 40~70% from 2010 level by 2050