Average Fuel Economy of Korea

2016. 8. 31

Sangjune PARK

The Korea Transport Institute

Contents

1. Background

Average Fuel Economy System

- The average energy consumption efficiency system (Average Fuel Economy), through the average fuel consumption of each car production company has been calculated by dividing the total sales volume of the fuel consumption of a car of the passenger cars sold in the country over the course of a year, It is a system to manage the fuel consumption of the domestic passenger car

- In view of the each production company by annual sales, average fuel consumption is calculated by a weighted harmonic average

- Achieved when the average fuel efficiency of the presented criteria from the country, defines the period of time it is possible to order the fuel economy improvement, during the improvement order breach, allowing publish the contents of the media

- Reference average fuel consumption
  > (Until 2011) displacement 1,600cc following 12.4㎞/ℓ,
  more than the displacement 1,600cc 6 miles/ℓ
  > Amount (from 2012) exhaust 1,600cc following 14.5㎞/ℓ,
  more than the displacement 1,600cc 11.2㎞/ℓ

1. Background

Related Laws

- **Energy Use Rationalization Act**
  - > Article 17 Systems for Average Energy Efficiency

- **Enforcement Energy Use Rationalization Act**
  - > Article 11 The average efficiency management
  - > Article 12 The average energy consumption efficiency

	Fleet average CO2 emissions					Targets	
	2009	2010	2011	2012	2013	2015	2020
Passenger car	158.6	151.6	147.5	140.3	140.8	140	97
Light truck	217.2	213.7	212.8	197.3	195.7	-	166
Total	166.7	160.5	154.6	148.5	149.4	-	-

<Table> 2009-2013 fleet average CO2 emissions and targets

2. Average Fuel Economy

Promotion Purpose

- To buy a car of superior fuel economy, to provide energy consumption efficiency and evaluation information of the automobile, saving energy through the fuel economy improvement of domestic sales passenger car

Define

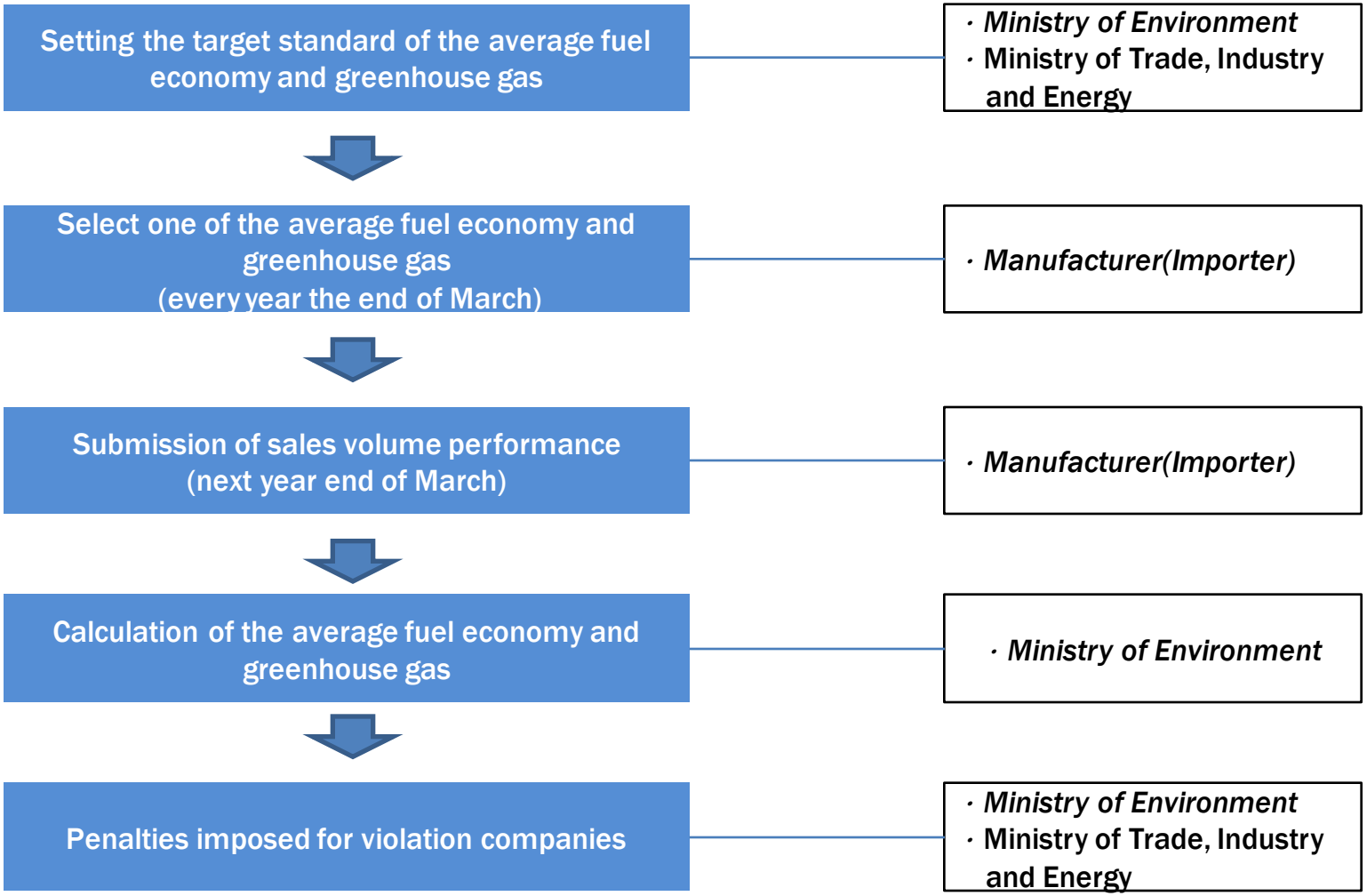
- Promotion of Development of a high-efficiency motor vehicles, in order to induce the purchase and sale, setting of standards for fuel consumption measurement test method of automobiles, evaluation criteria setting, management of the publisher and import company, display fuel consumption post-management, the provision of consumer information plans to carry out

Target

- Vans car with the exception of passenger cars, and the following sub-type 15-seater out of the vehicle is less than a gross vehicle weight of 3.5T
- Light and light trucks except the shape of special purpose

2. Average Fuel Economy

Propulsion Procedure



2. Average Fuel Economy

Average of the greenhouse gas of motor vehicles · Fuel efficiency standards (draft) in South Korea (2016 to 2020)

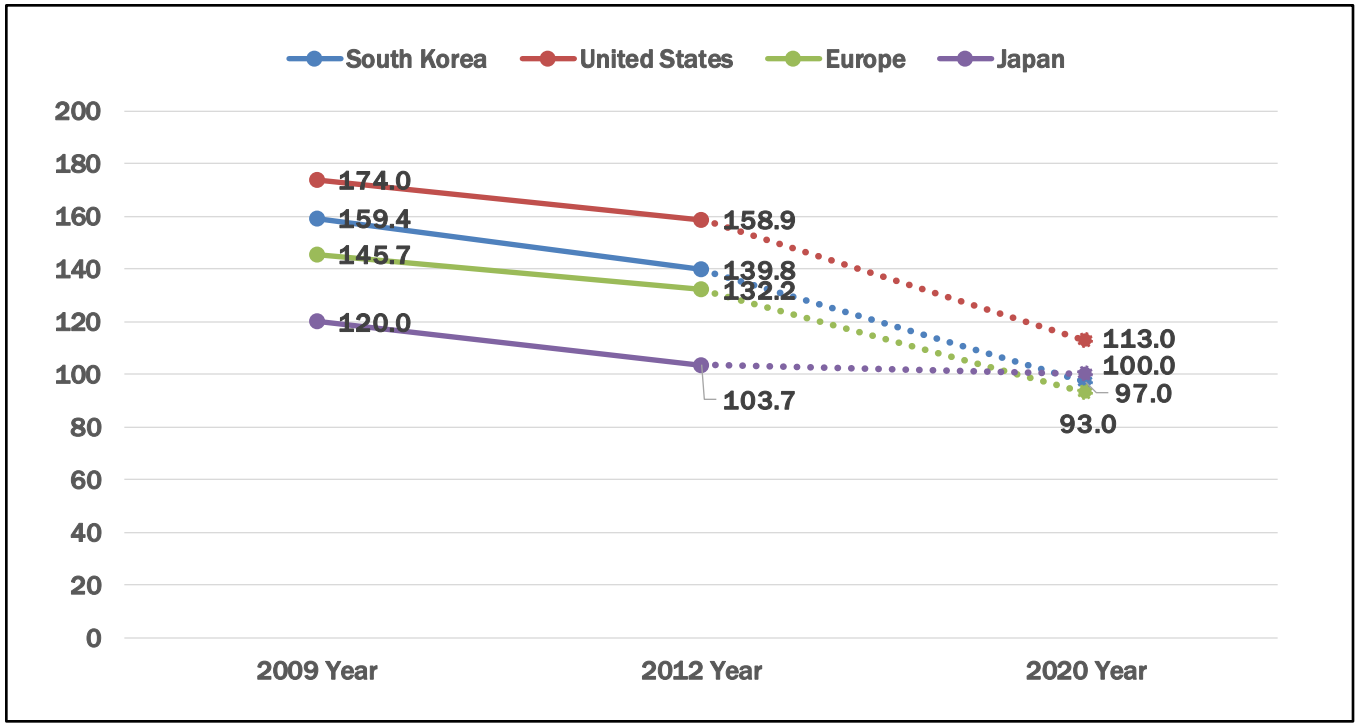
- Greenhouse gas 140g/km, fuel economy 17km/ℓ (in 2012 to 2015)
  - 2012 and 2013, and achieved the 2015 standard

- Greenhouse gas 97g/km, fuel economy 24.3km/ℓ (in 2016 to 2020)
  - Criteria of greenhouse gases : the Ministry of the Environment
  - Fuel economy standards : Ministry of Trade, Industry and Energy
  - Various conditions such as implementation performance management of the production company : Ministry of the Environment is integrated management

	2012 (Result)	2020 (Standard)	Decrease in annual average
South Korea	140	97	**4.5%**
United States	159	113	**4.2%**
Europe	132	93	**3.8%**
Japan	104	100	**0.5%**
China	173	110	**5.5%**

2. Average Fuel Economy

- In terms of the fuel efficiency standards in the South Korea of the measurement method (combined mode)
  - Europe : 91g/km (2021 years)
  - Japan : 100g/km (2020 years)
  - United States : 113g/km (2020 years)



<Picture> Emissions of greenhouse gas by country

2. Average Fuel Economy

Expansion Automobile Models

- Current is of management models less than 10 seats, less than 3.5 tons passenger car and van
- In this standard, 15-seater following vans and cargo vehicles of less than 3.5 tons will be added
- 15 seats or less of the van emissions of greenhouse gas 191g/km, fuel economy 14.1km/ℓ -> greenhouse gas 166g /km, fuel economy 15.6km/ℓ
- South Korea will be to manage the greenhouse gas of small commercial vehicles from 2016
  - The United States and Europe is already light commercial vehicles of less than 3.5 tons.

3. Implications

Average Fuel Economy System in Intermediate·Full size car

- The current management model 10 seats or less, is a passenger van less than 3.5 tons
- But, In the next standard, 15-seater following vans and cargo vehicles of less than 3.5 tons of greenhouse gas. It is added to the fuel managed
- Currently, it sets each emissions 191g/km of greenhouse gas, the fuel economy 14.1km/ℓ level of 15 seats or less of the van and the standard of track greenhouse gas 166g/km, fuel economy 15.6km/ℓ

Construction of Fuel Economy Automobile Center

- fuel economy technology development assistance and policy excavation to enhance the competitiveness of companies
- consumer confidence display fuel Economy throughout the test method and system research

2. Average Fuel Economy

Effect of Enforcement

- The government, Social and economic benefits associated with the fuel efficiency system enforced, predicted a total of 59 trillion won worth of five-year period (2016 to 2020)

- Reduction of greenhouse gases, is expected to greenhouse gas emissions (BAU) of 1,640 million tons in 2020.
  - This has accounted for 92% of the reduction target 17.8 million tons of greenhouse gases in the automotive field
  - Social benefit of this, reach 8 trillion won in five years

3. Implications

- **Key standard on reduction of GHG in transport**
  - A key index for control GHG emissions of vehicles
- **Promote energy saving based on technical development in transport**
  - Higher standard has more effects on energy efficient vehicle development
- **Burden for car manufacturers**
  - Still growing situation of green car market

사람·환경·교통의 조화 속에 미래의 삶을 풍요롭게 바꾸는

한국교통연구원

감사합니다

Thank you