Status and Outlook for Vehicle Efficiency and Emissions Standards in China

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Outline

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03 Outlook
Emission standards is an effective way of emission control.

Since the implementation of the China I standard in 2000, the pollutants of single vehicle has reduced by more than 95 percent, and the total vehicle emission has been effectively controlled while the vehicle population has grown rapidly.
Major breakthroughs were made in China VI standards

As one of the most stringent emission standards in the world, the China VI Standards has achieved major breakthroughs in testing procedures, pollutant limits, and compliance supervision. It has been awarded the 2018 Climate and Clean Air Award by the CCAC of the UNEP.
Since China implemented fuel consumption standards in 2005, fuel consumption levels has declined gradually. The CAFC of PV decreased from 7.3 L/100km in 2013 to 5.6 L/100km in 2020. From 1999 to 2019, the car population increased by 16.4 times, but the CO₂ increased by 4 times.
In order to reduce the fuel consumption and promote NEV, China has implemented the credit management of CAFC and NEV. In 2019, China sold 1.2 million NEV, ranking first in the world for five years, and holding 3.8 million vehicles, accounting for more than half of the world.
Challenges
China faces the dual pressure of air quality and climate change

**2035 Target**

- All the cities are up to air quality standard by 2035
- Annual average concentration of PM$_{2.5}$ down to 25μg/m$^3$
- SO$_2$, PM has been solved

“By 2035, the ecological environment will be fundamentally improved”

- Peak the CO$_2$ emissions by 2030
- Carbon neutrality by 2060

President Xi Jinping has set a goal of peaking carbon emissions by 2030 and becoming carbon neutral by 2060. China has also set the goal of improving air quality by 2035. But 40.1% of cities don’t meet air quality standard, and vehicles are an important source of urban pollution.
The vehicle population will grow rapidly in the future, and is expected to reach 400 to 500 million by 2030. With the in-depth control of vehicle emissions, the machinery, railway, ship, aircraft and other off-road emissions are increasingly prominent.
Outlook
GHGs will be included in the existing vehicle emission standards system, and a coordinated control system for air pollutants and GHGs will be established. Unified testing and compliance supervision, so as to achieve pollution and carbon reduction at the same time.
Establishing an evaluation system based on actual emission control

A comprehensive evaluation system for air pollutant and greenhouse gas emissions will be established, mainly based on laboratory tests and real drive emission (RDE) tests, supplemented by special tests such as low temperature, high altitude and air conditioning.
Establishing a life cycle emission compliance supervision system

- Through the vehicle environmental protection information disclosure, production compliance inspection, and environmental protection recall, establish and improve the life cycle emission compliance supervision system, ensure the vehicles to meet standards in life cycle.
Thank you!