

China's Progress in Vehicle Emission Control (2013-2017)

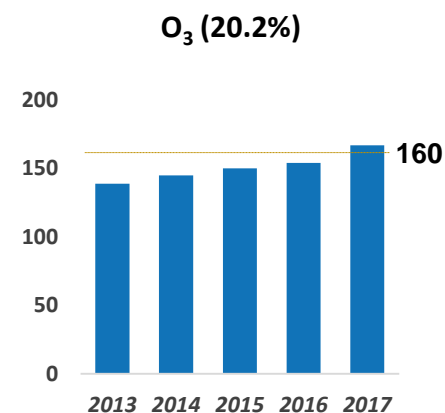
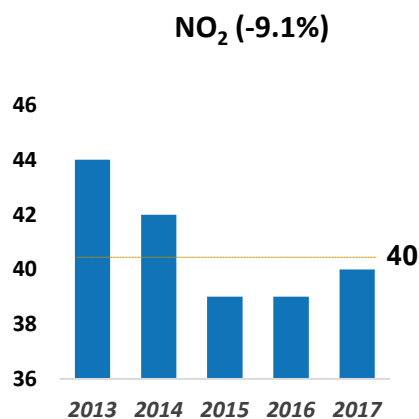
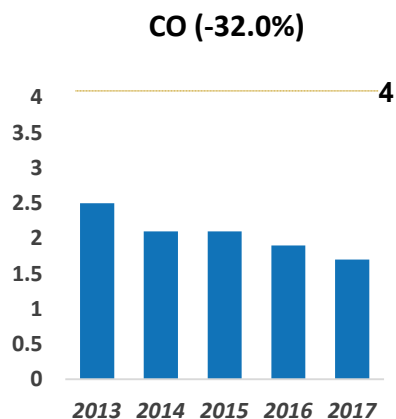
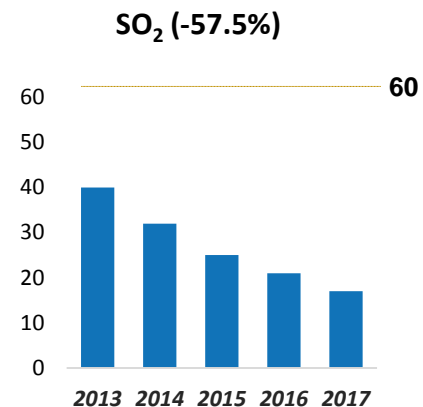
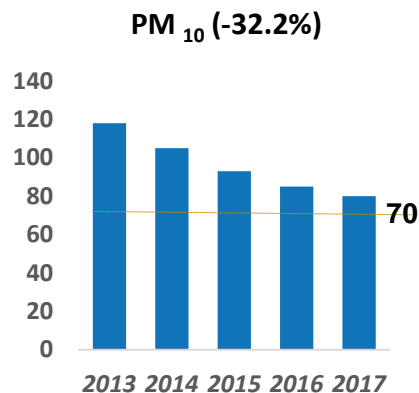
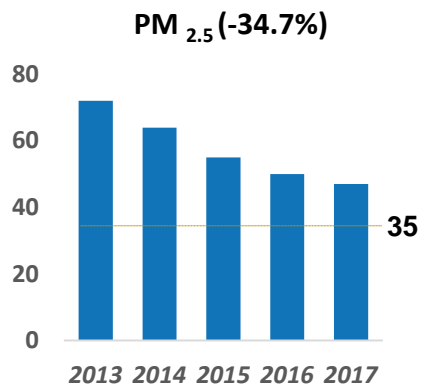
FU Lu
China Director
Clean Air Asia

CSE Workshop
September 4-5, 2018, Delhi, India



Overall Air Quality Improved

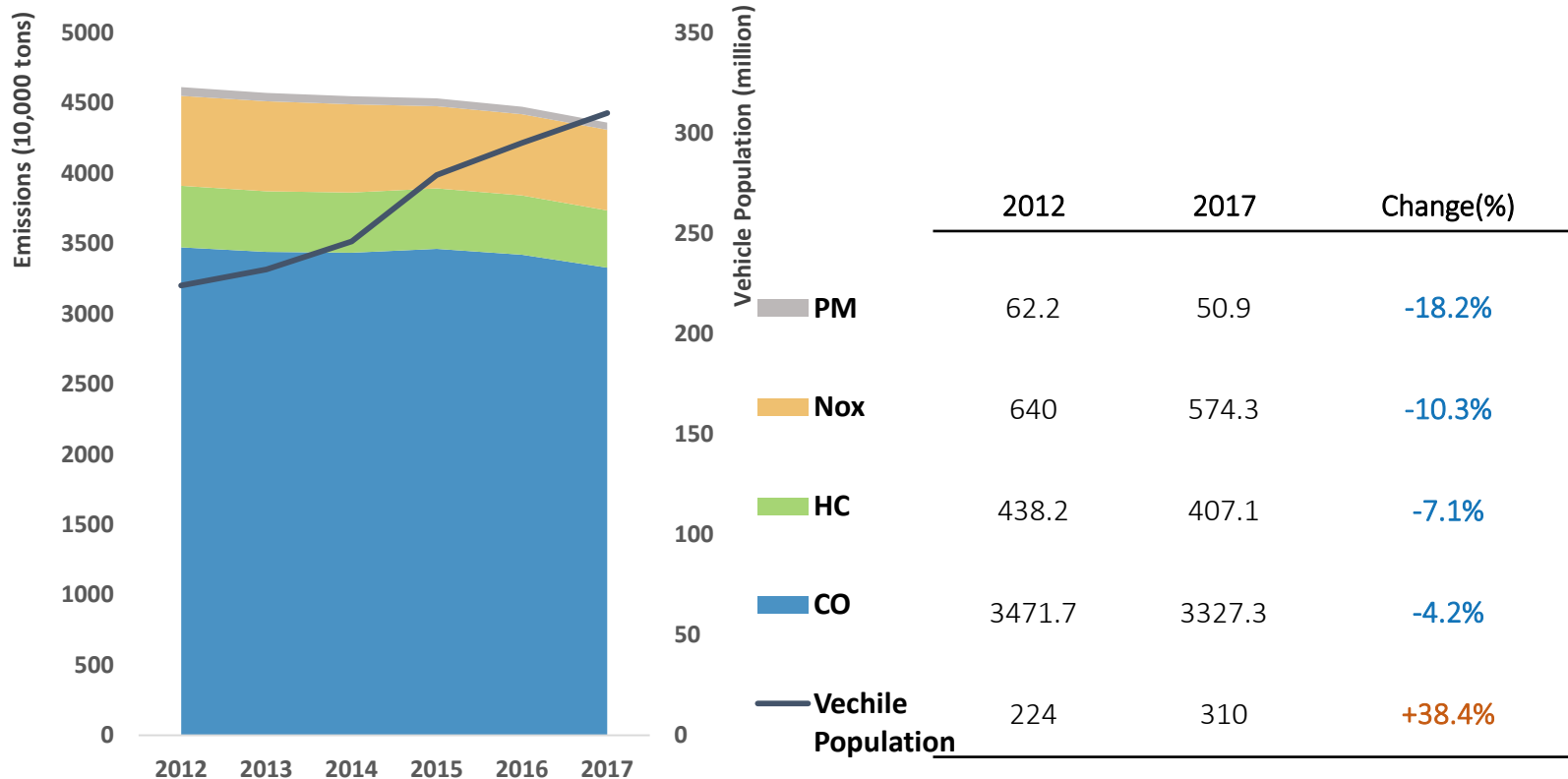
Concentration of 6 criteria air pollutants of 74 key cities from 2013 to 2017



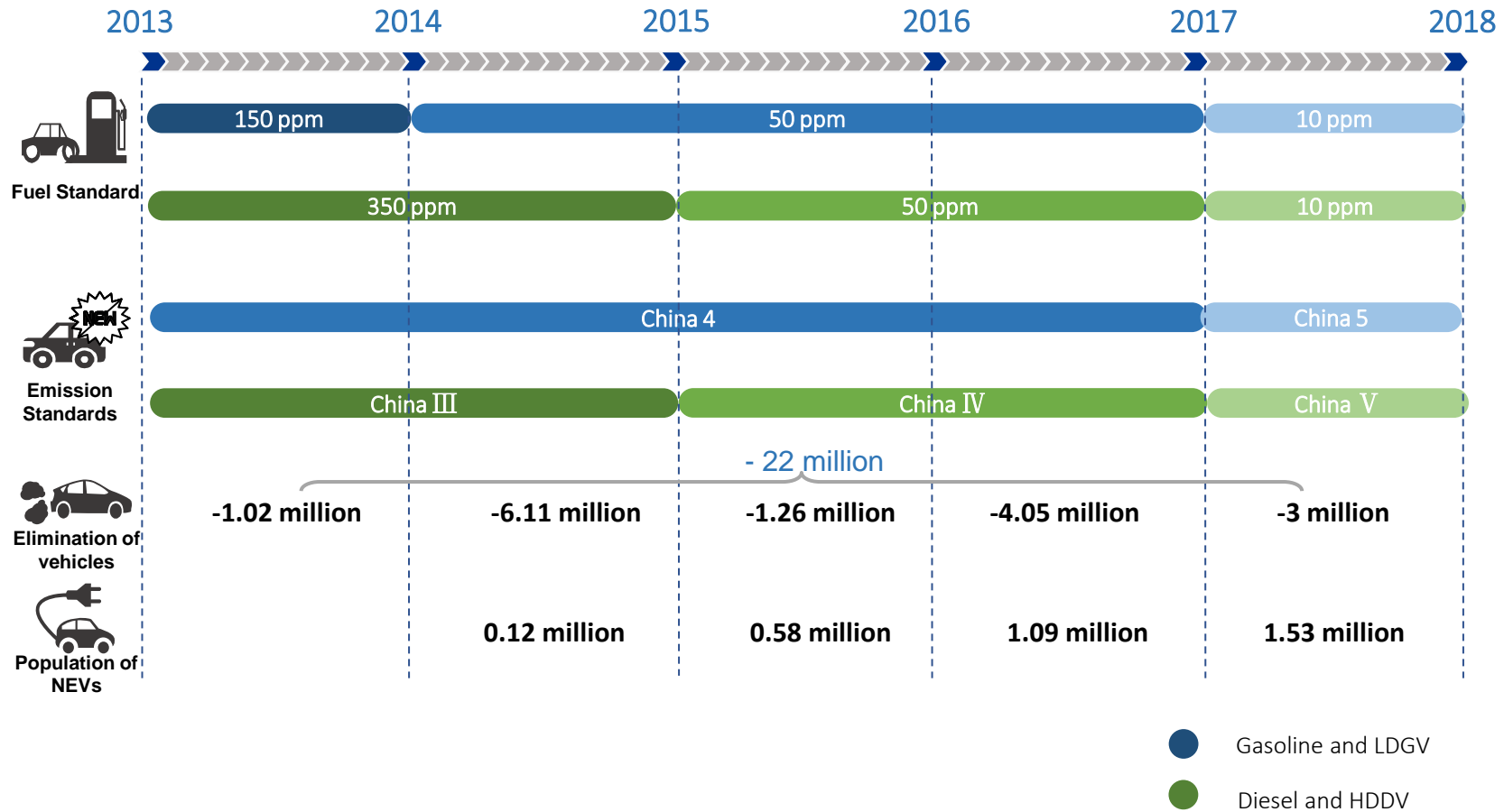
■ Annual mean concentration (unit: $\mu\text{g}/\text{m}^3$ CO: mg/m^3) — China NAAQS

Emissions from Vehicles Declines despite Surging Population

Changes of vehicle population and emissions (2012-2017)



Nationwide Stringent Measures to Control Vehicle Emissions



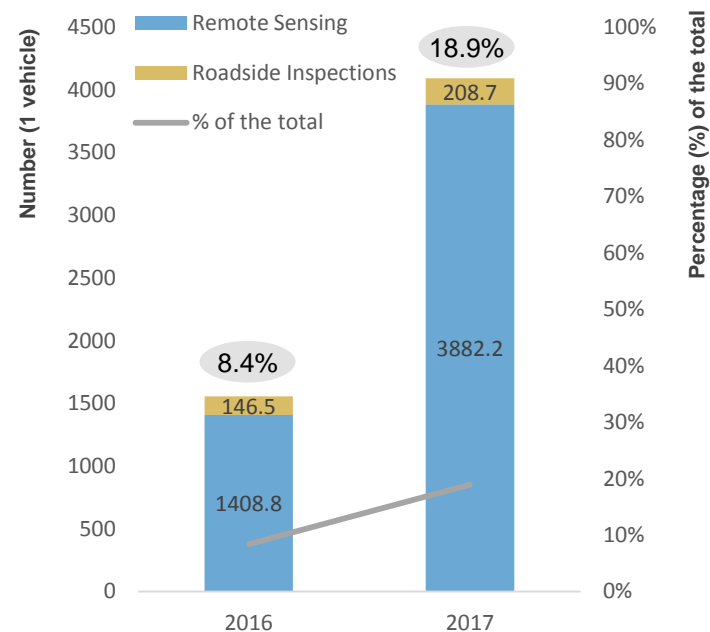
Tightens Compliance and Enforcement

Enterprise Information Disclosure of New Vehicles



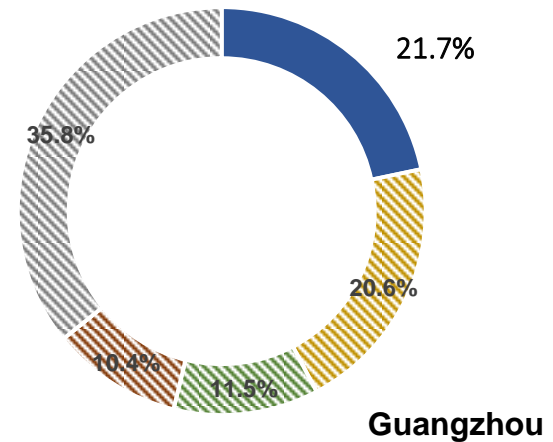
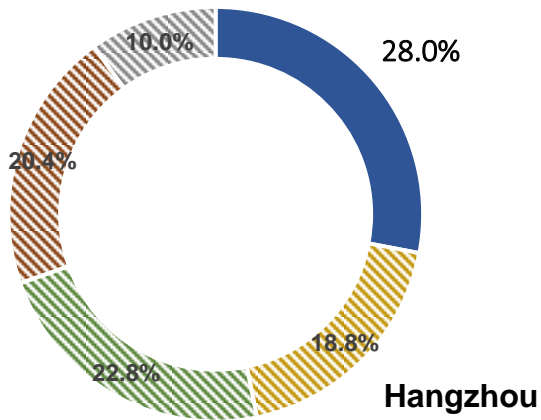
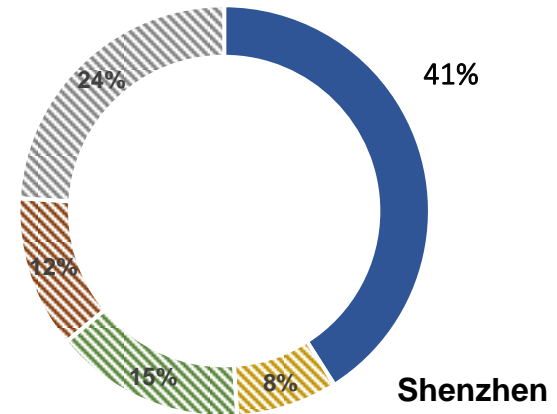
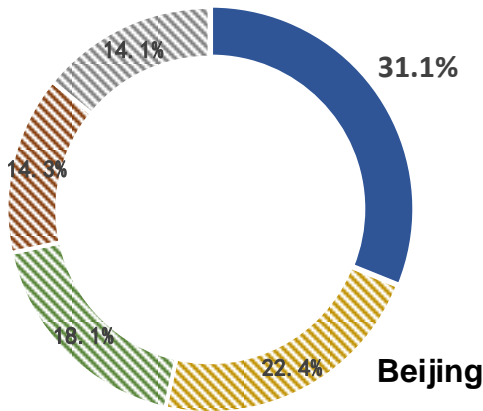
Year	Enterprise (#)	Vehicle model(#)
2016 Q4	405	10702
2017	1031 (76%)	52952

Government Inspection of In-use Vehicles



Mobile Source: Largest Contributor to PM2.5 in 4 Mega and Large Cities

Source apportionment results of PM2.5 in 4 cities (2014)



■ Mobile Source ■ Coal Combustion ■ Industrial Production ■ Fugitive Dust ■ Other Sources

Shenzhen: Measures for Vehicle Emission Control

Early Implementation of National Standards

- China 4/IV ahead of national plan by 1 and 4 years respectively.
- China 5/V ahead of national plan by 2 years
- Plans to implement China 6 in 2019

Phase-out of High-polluting Vehicles

- Shenzhen eliminated all yellow-label vehicles by the end of 2015 and continues to eliminate outdated vehicles
- Subsidy provided for the elimination
- Traffic restrictions of these vehicles

4 Key Measures

- Promote DPF installation

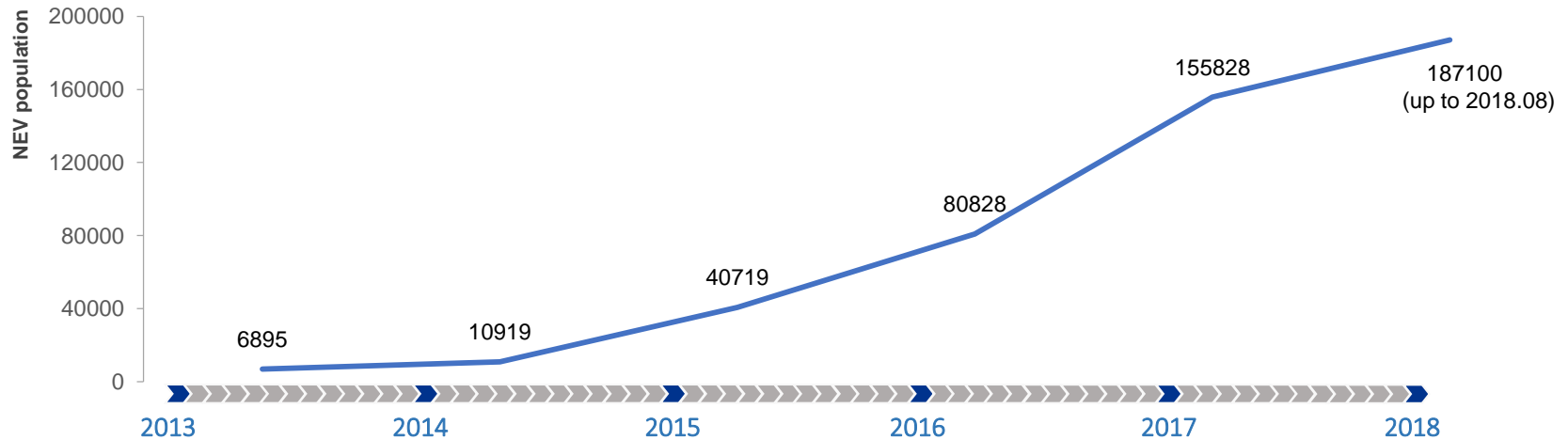
DPF Installation on In-use Vehicles

- Bus, taxi and logistics vehicles
- Government subsidy

Promotion of NEVs

Shenzhen: No. 1 Promoting New Energy Vehicles

Continuous increase of NEV population driven by government subsidy



Bus

5,000+ fully electrified

48% (6560) of the total bus fleet.

World's first **all-electric bus city**, world's No.1



Taxi

10,000+, world's No.1

65% (13,000+) of total amount; **100% electrification in 2018**



Logistics vehicle

World's No.1 for 3 consecutive years since 2015

36,649 by the end of 2017

Observations of Experiences

- ✓ **Government plays the key role**
- ✓ **Set up specialized institute within the government**
- ✓ **Importance of data analysis and scientific study**
- ✓ **Phase approach of policy implementation**

Observations of Lessons Learnt

- ✓ Technology readiness vs. cost consideration
- ✓ Public communications
- ✓ Manufacturers' responsibility



THANKS

For more information: www.cleanairasia.org