

# Climate Policy in an Energy Boom

## August 6 – 9, 2013

### Asilomar Conference Grounds

### Pacific Grove, California

Session IV – 8:45 to 10:45 a.m.  
China, the Giant

Moderator: Feng An, *Innovation Center for Energy and Transportation*

Speakers:

- Kebin He, *Tsinghua University*
- Xiliang Zhang, *Tsinghua University*
- Michael Wang, *Argonne National Laboratory*

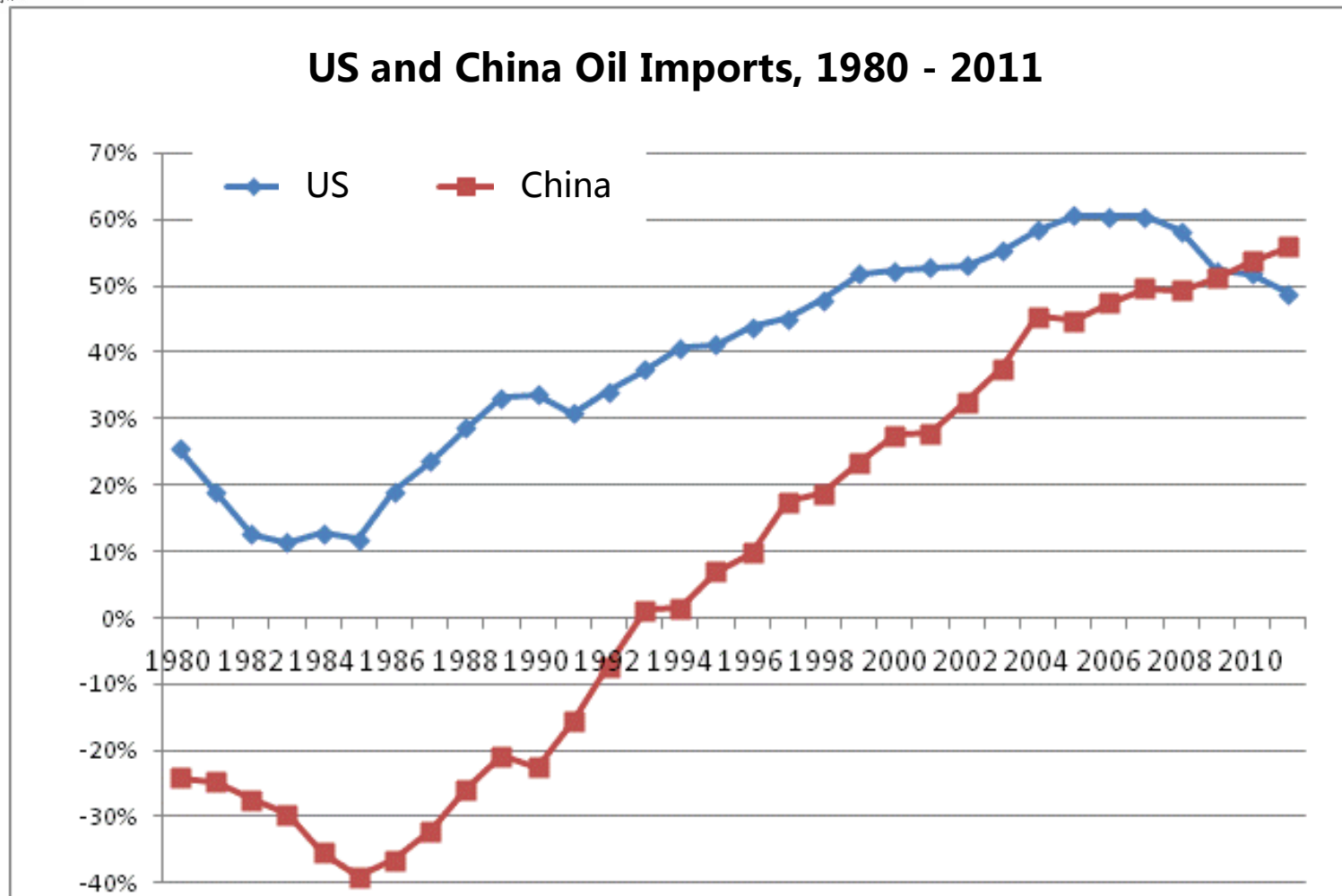


# China Auto Fuel Economy Policy Overview

Feng An

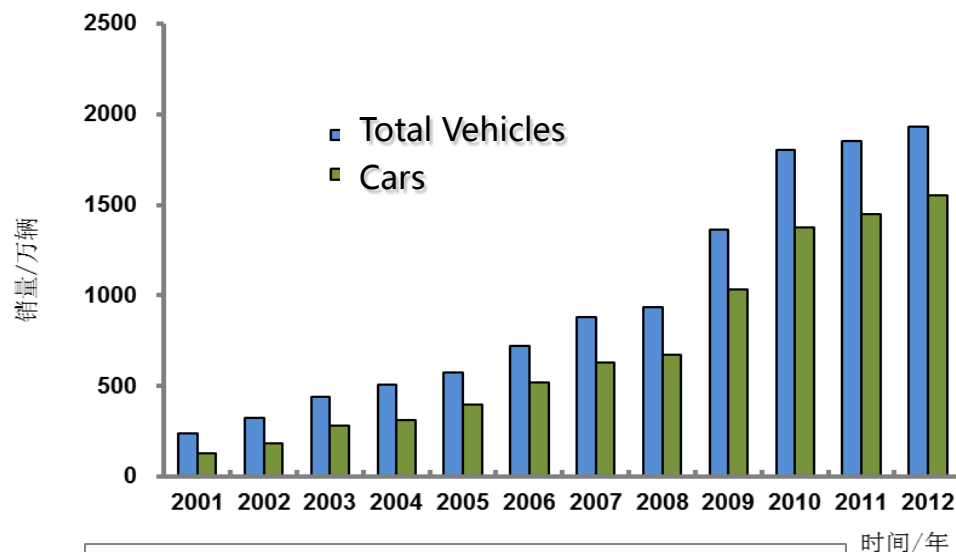
Innovation Center for Energy and  
Transportation

# China Oil Imports have reached 58% by the end of 2012, China is likely to surpass US in total imports next year

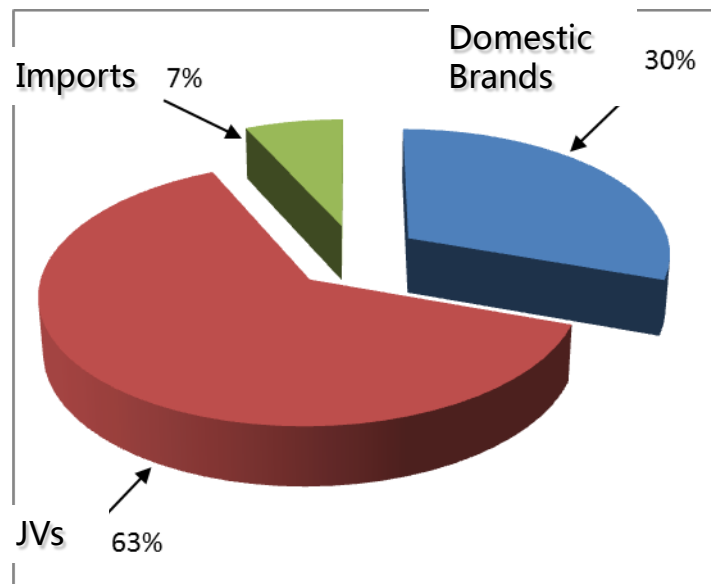


Source: BP Statistical Review of World Energy June 2012

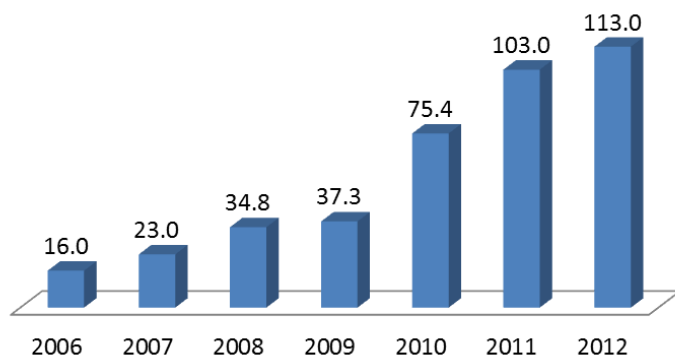
# 2012 China Auto Sales surpassed 19 millions, car sales accounted for 80%, and are up by 7%



Domestic Brand only accounts for 30% of total sales. **2012 China imported 1.13 million vehicles, about 7% of total**



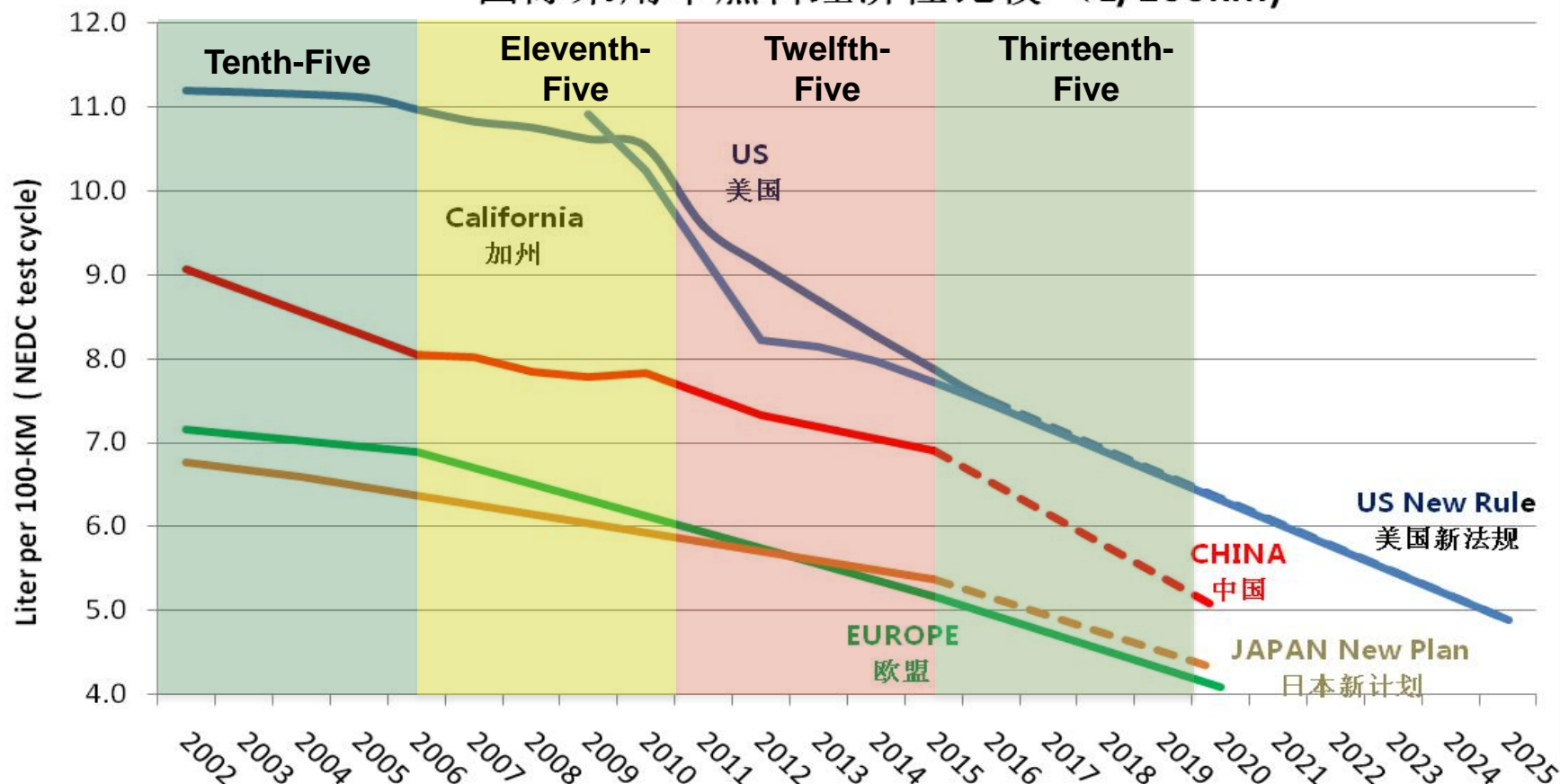
## Chinese Imports (10K)



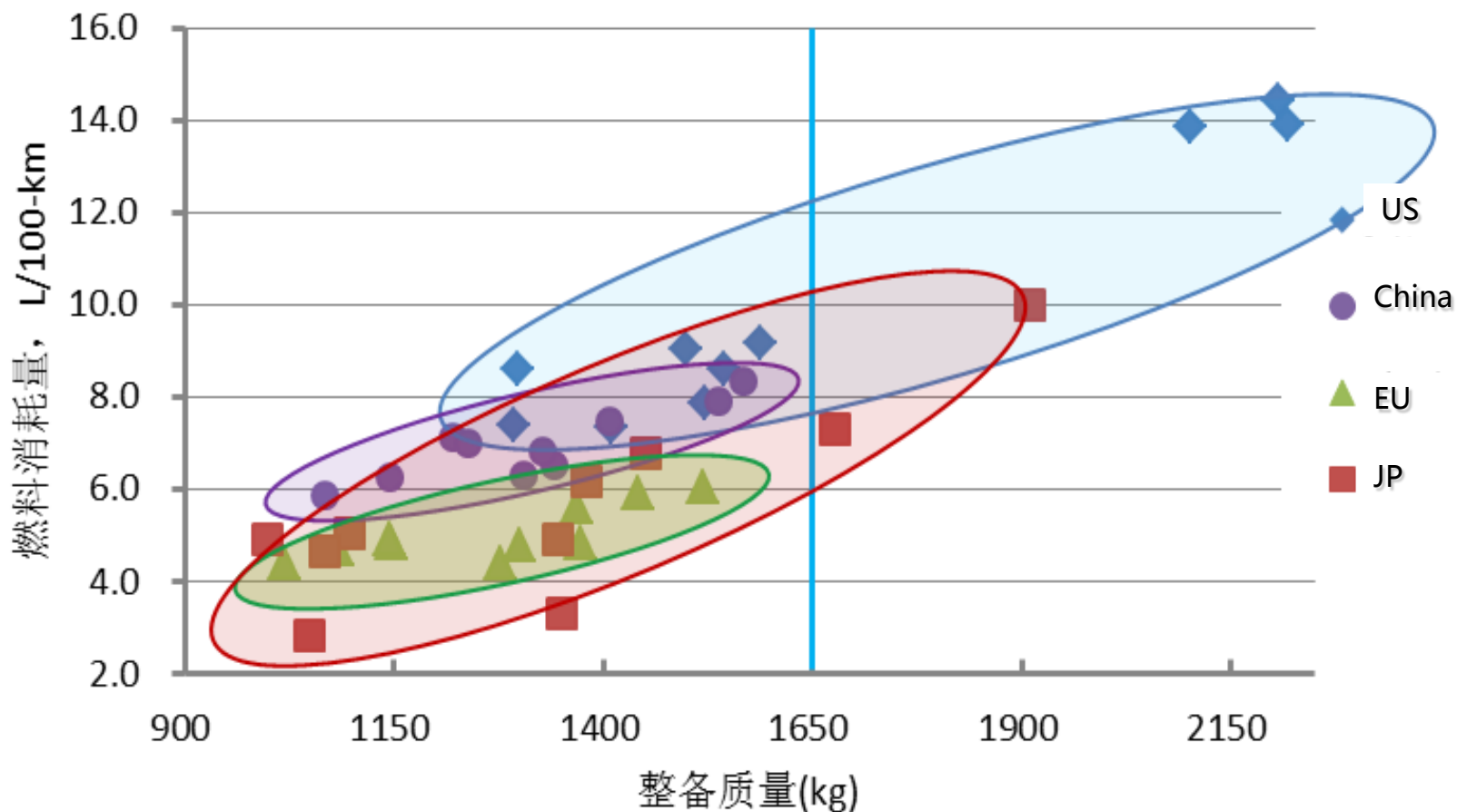
# Fuel Economy Trends of China, US, EU and Japan

- China's progress has slowed down during eleventh-five period (2006-2010)

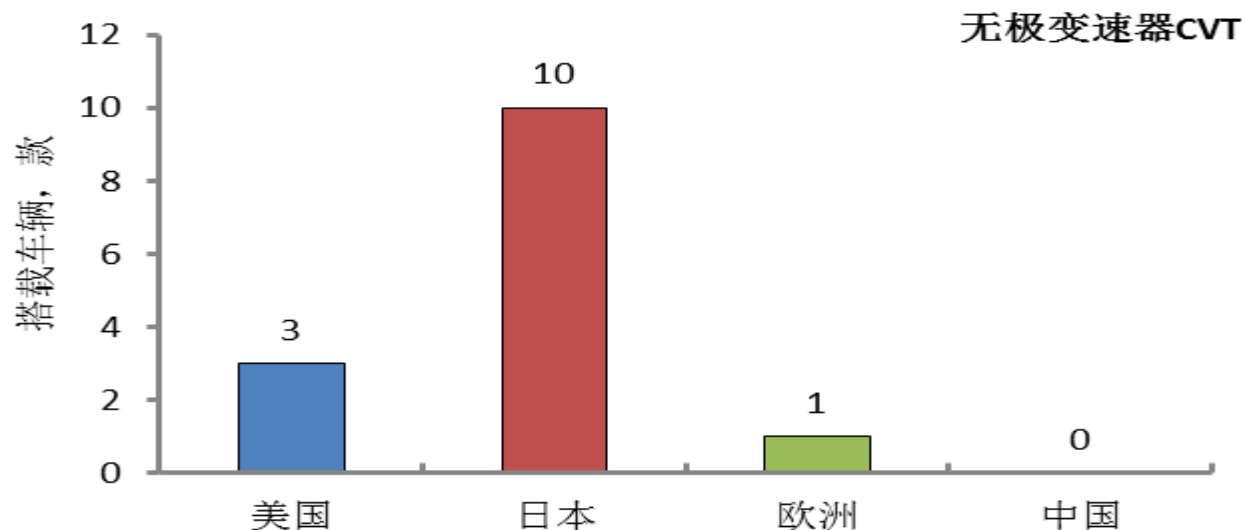
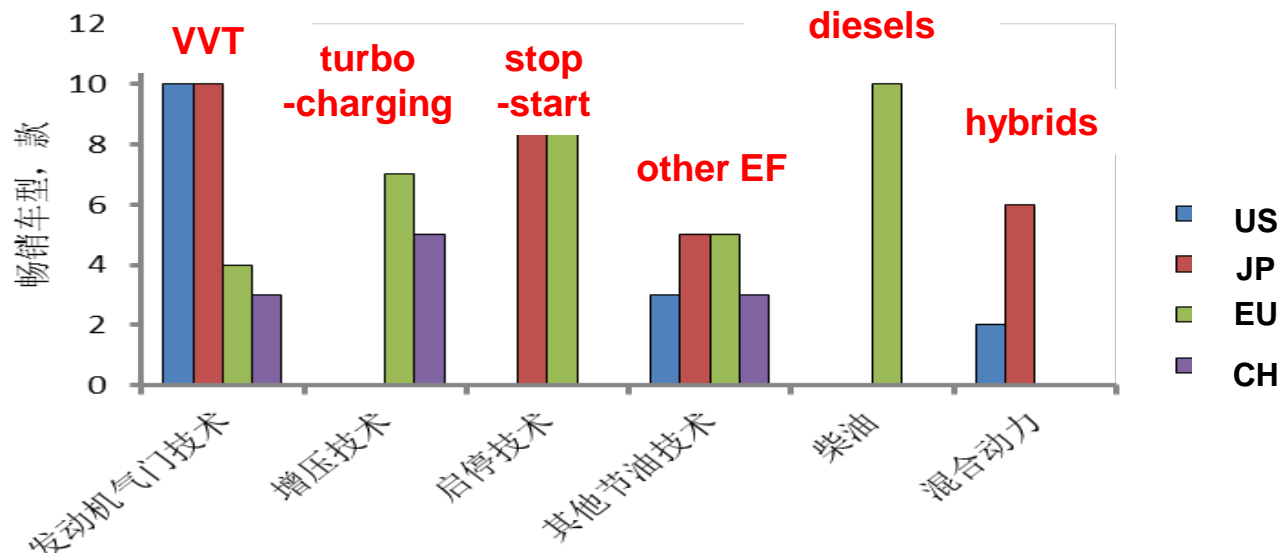
Comparison of International Fuel Economy and GHG Standards  
国际乘用车燃料经济性比较 (L/100km)



China's Top-10 selling vehicle models are about same size of the EU and Japanese models in term weight and body size, but have higher fuel consumption rates.

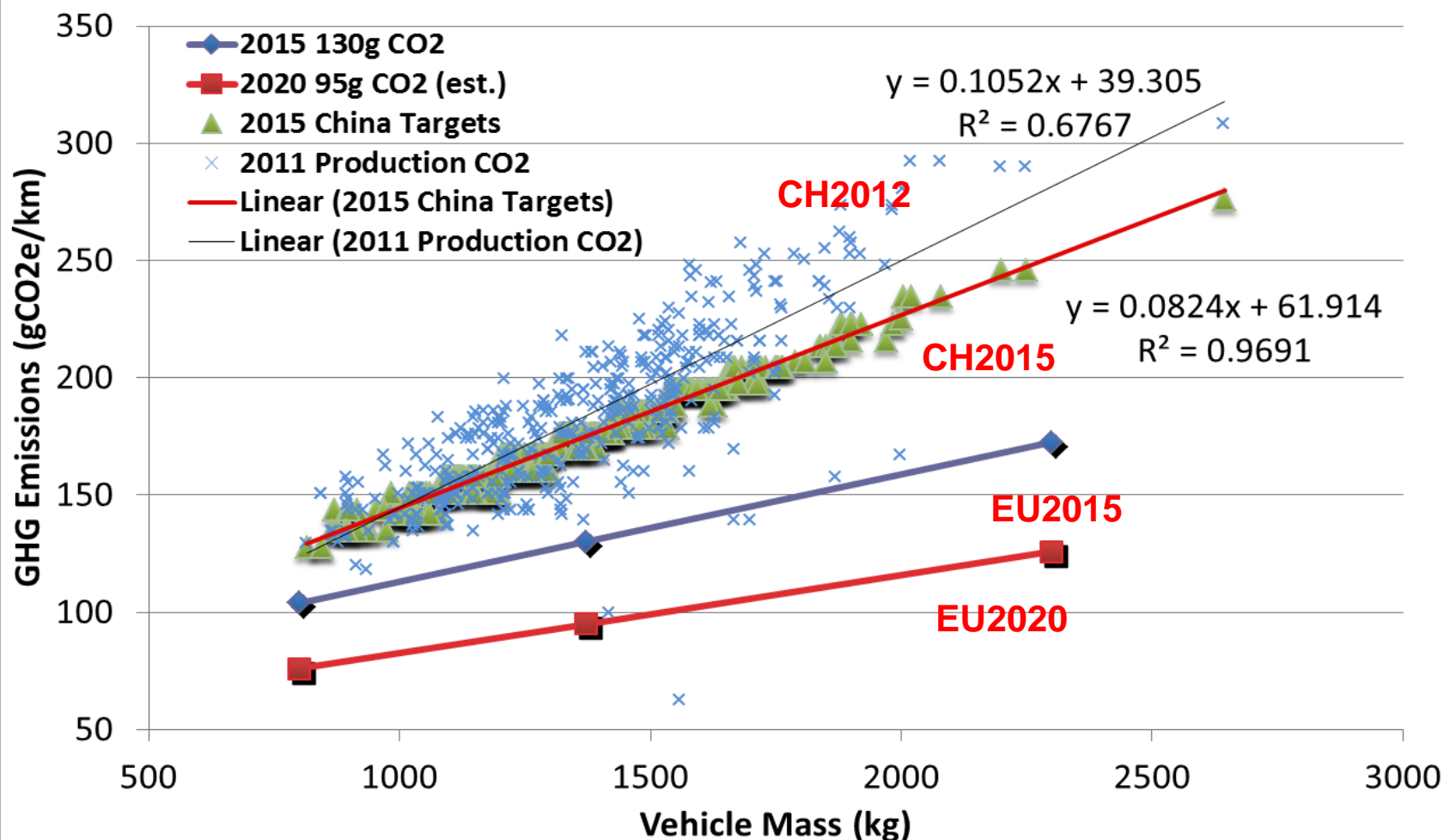


# Chinese vehicle models use much less fuel efficient technologies than their US/EU/LP counterparts



# China vehicle standards are much weaker than EU's

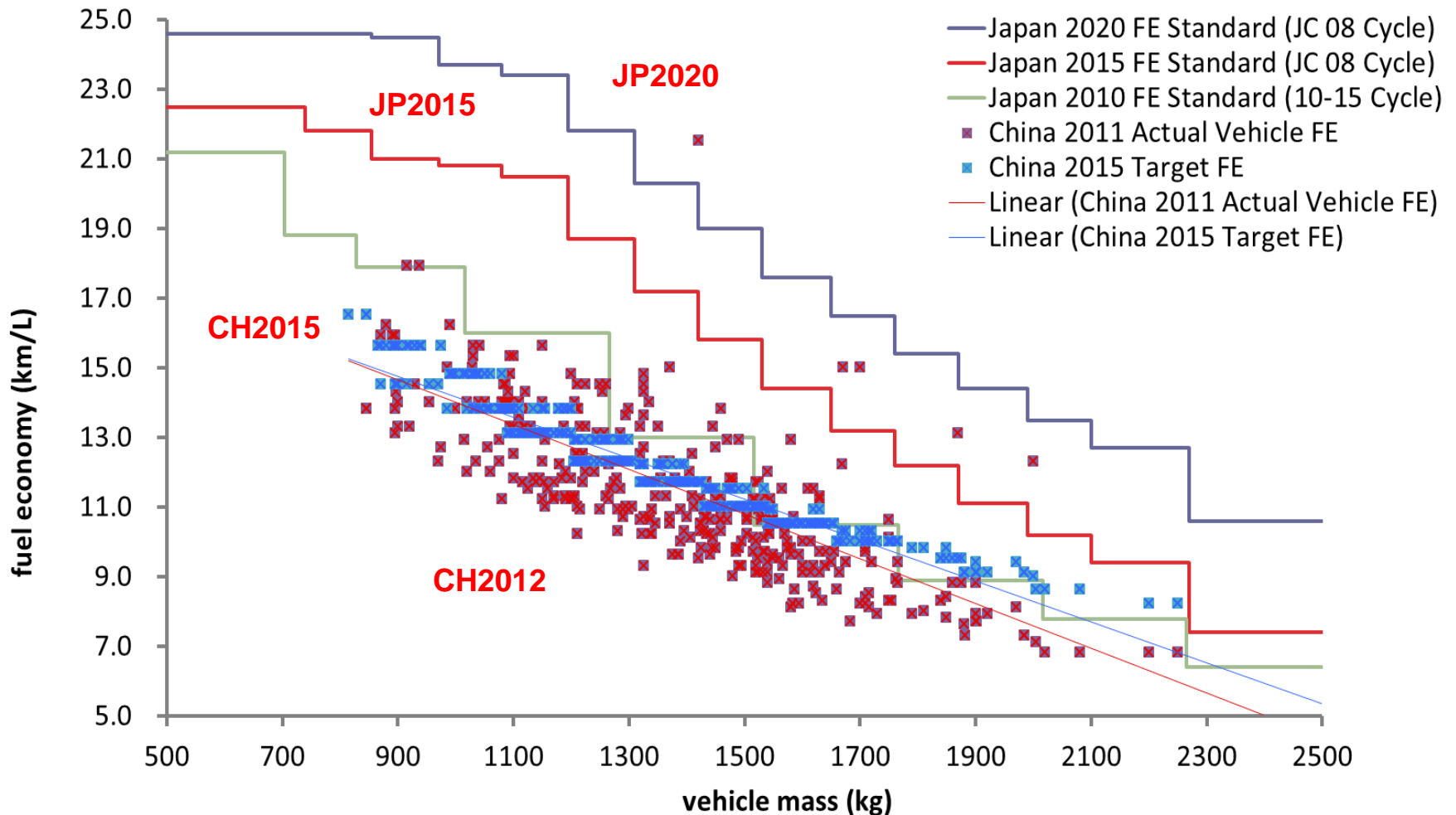
China 2011 Actual and 2015 Targets vs EU 2015-2020 CO2 Standard for Cars





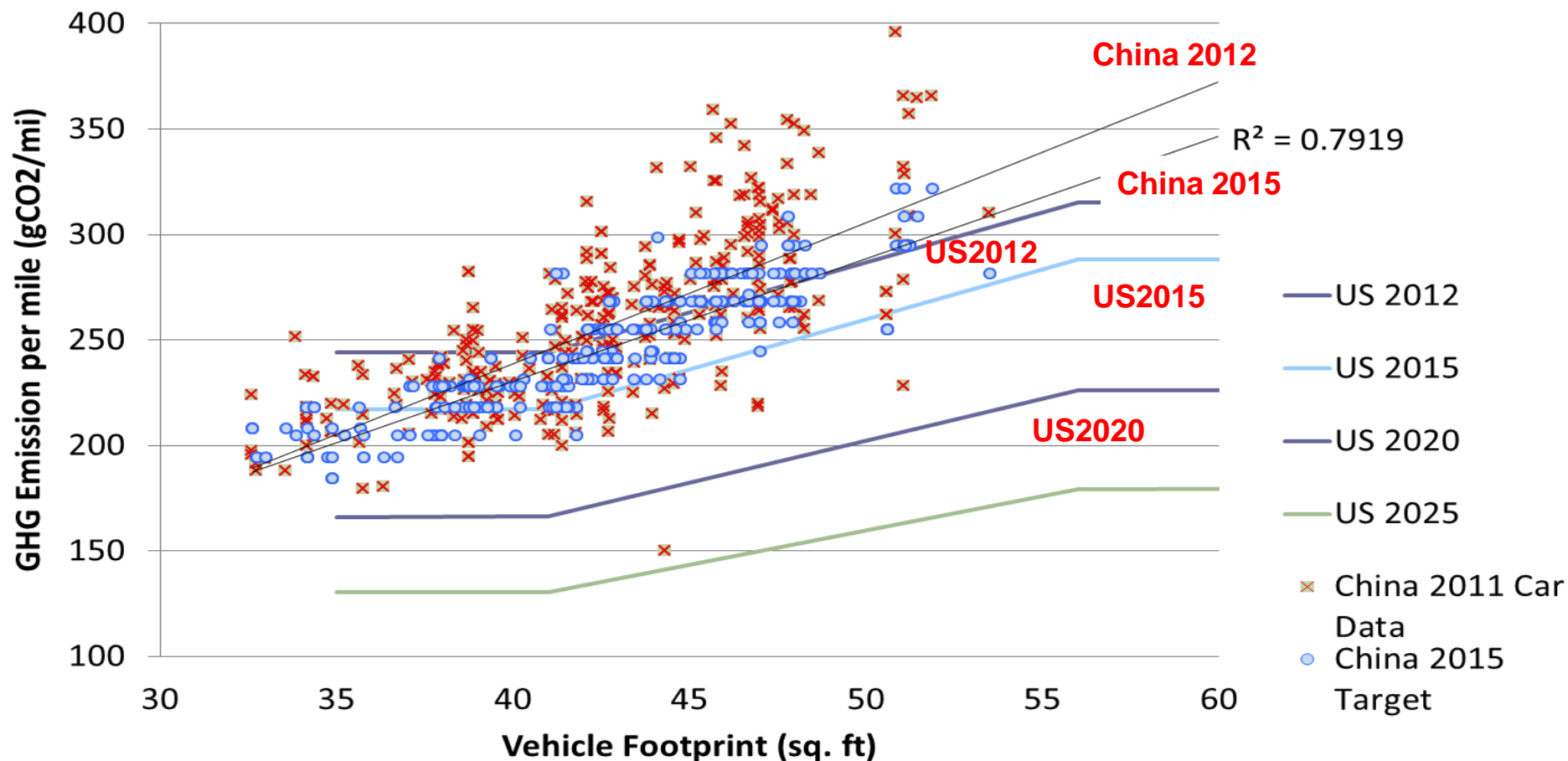
# China vehicle standards are weaker than Japan's

China 2011 Actual and 2015 Target Fuel Economy vs Japan Standards for Cars



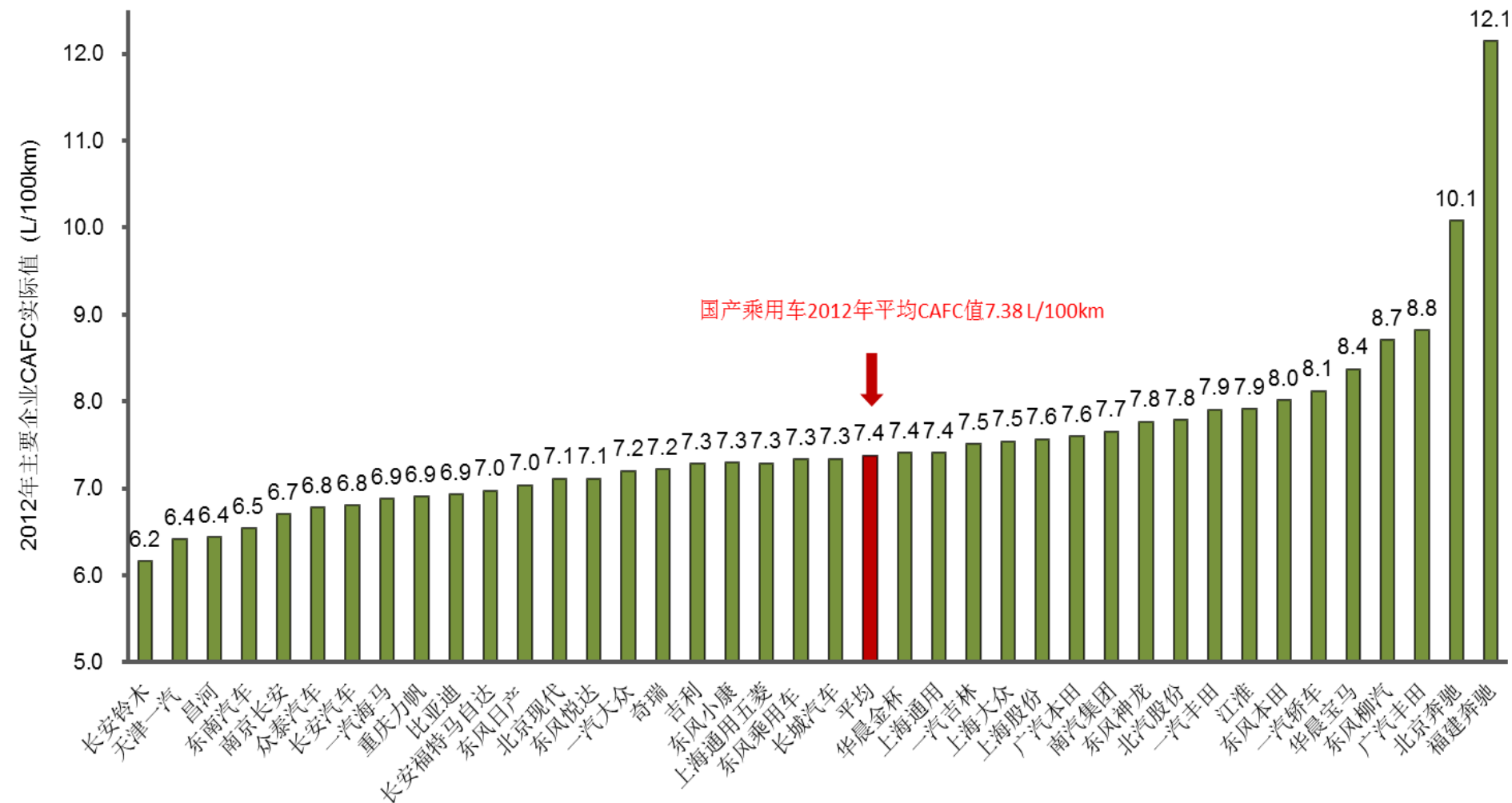
# China vehicle standards are even weaker than US in 2015

**2011 China Auto Model Car Only GHG Emission Actual and Target Comparison to US 2012-2025 Footprint-Based Car GHG Emission Targets**

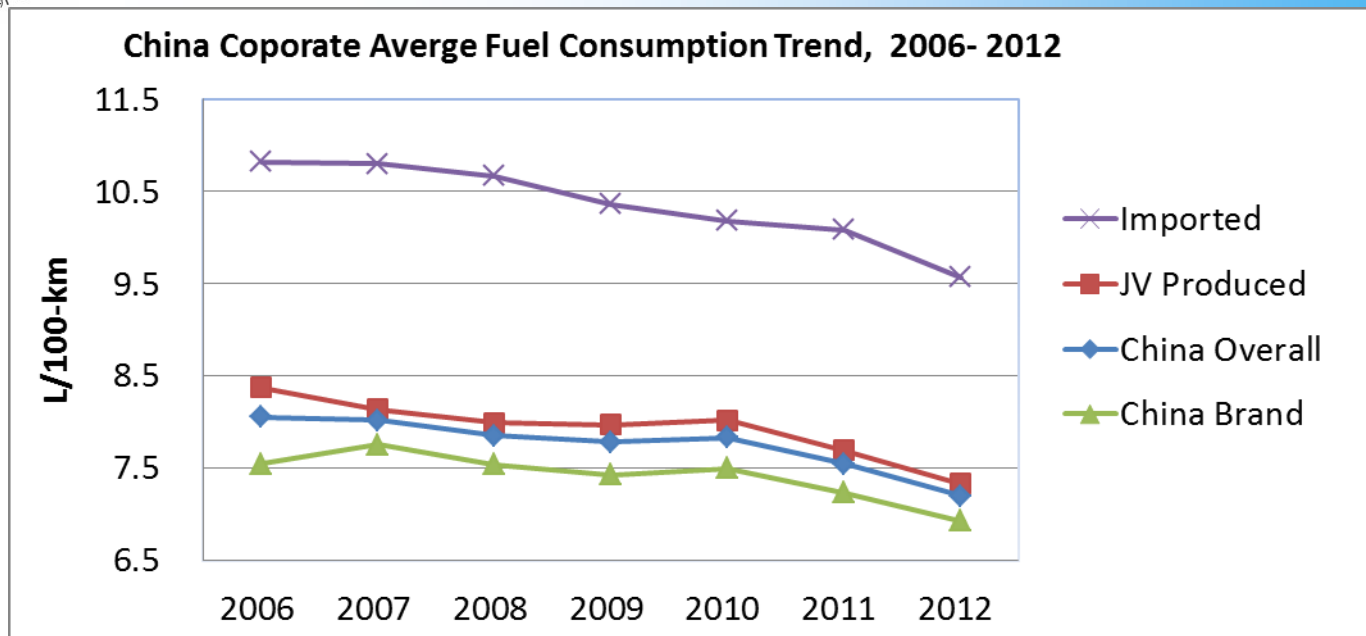




# China Automaker Corporate Average Fuel Consumption

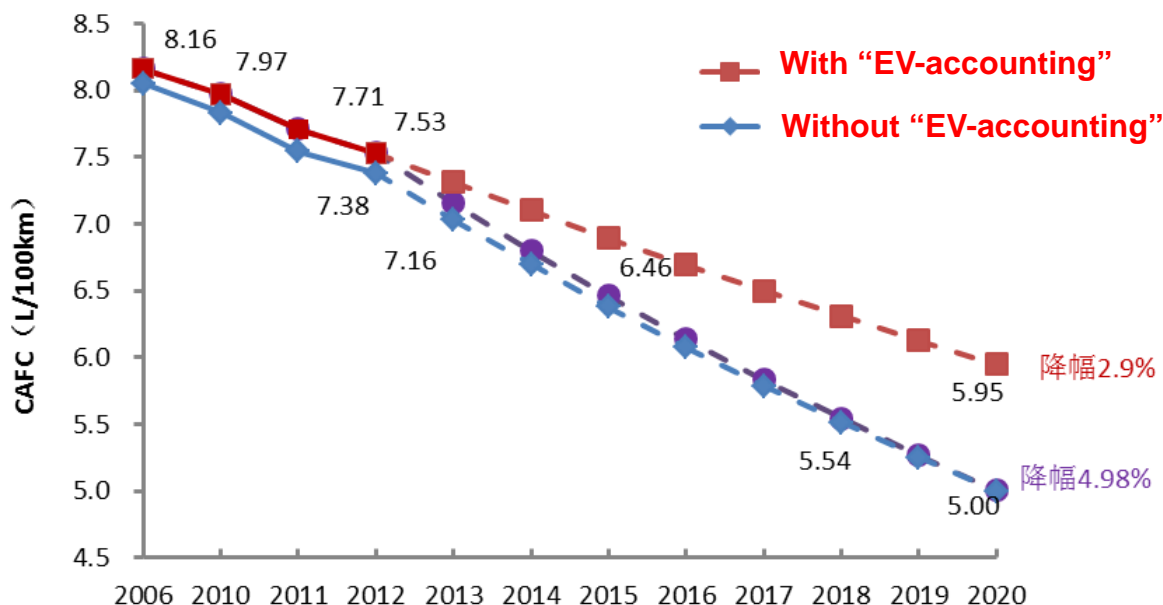


# 2006 - 2012 CAFC Reduction averages only about 1.3% annually



Type	2012/2011 Reduction	2011/2010 Reduction	2012/2006 Annual Reduction
China Average	2.3%	3.3%	1.3%
Local Made	2.2%	3.7%	1.4%
Imports	5.1%	1.0%	2.0%
JVs	3.6%	4.1%	2.0%
Domestic Brand	-1.0%	3.5%	0.5%

# To Achieve 2020 5L/100km Target, annual improvement needs to be about 5%, far greater than the average rates of 1.3% from 2006-2012



However, every new energy vehicle can be accounted for up to five (5) zero-fuel consumption vehicles. With the target of 5 millions new-energy vehicles on road for 2020, the annual reduction rates can be only 2.9% to achieve the “theoretical” 5 liter target, so be aware of the creative EV- Accounting!

# Great Pressure on 2020 Target

Comparison of International Fuel Economy and GHG Standards  
国际乘用车燃料经济性比较 (L/100km)

