

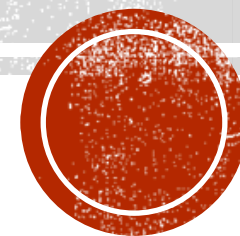
# OPPORTUNITIES OF EU-CHINA CLIMATE LEADERSHIP

HU, Min

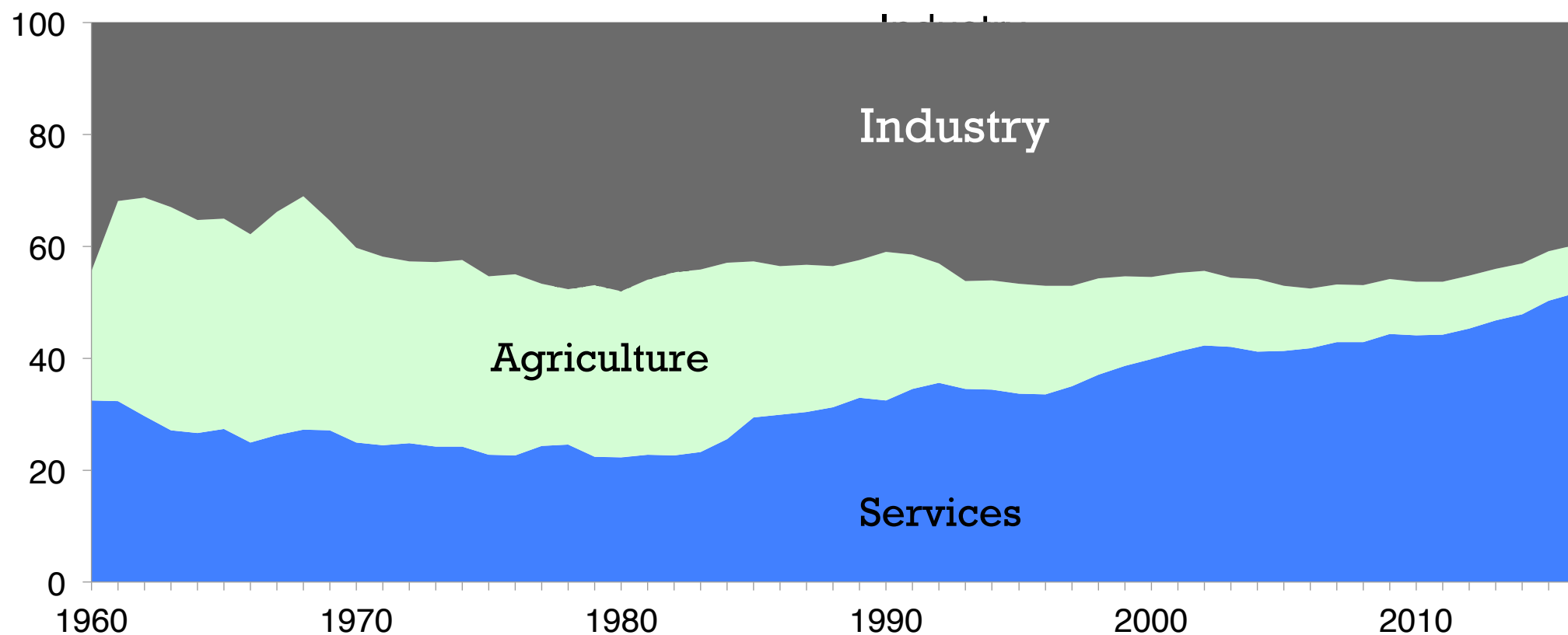
Founder & Executive Director

Innovative Green Development Program (iGDP), China

May 13<sup>th</sup>, Madrid

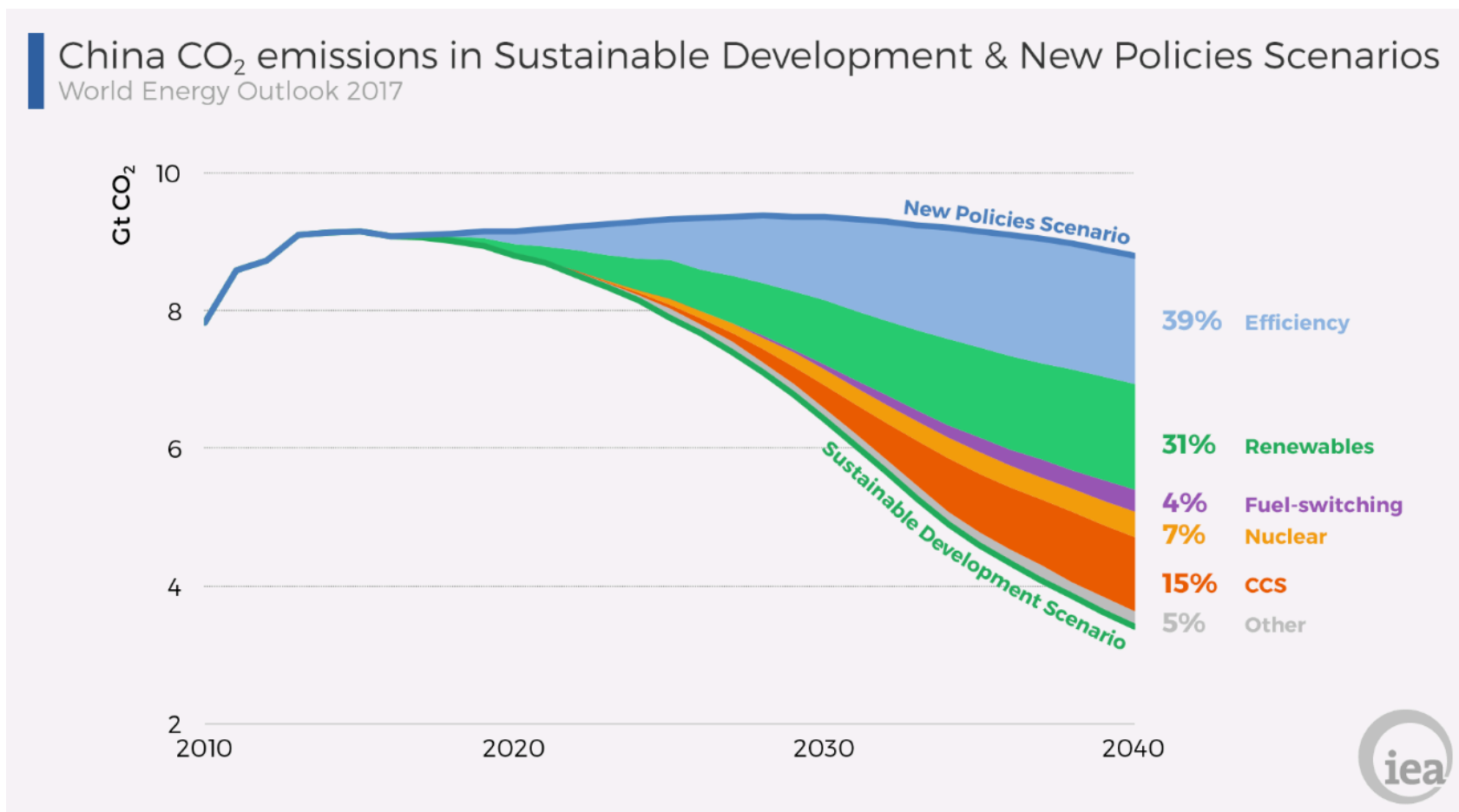


# CHINA'S ECONOMY STRUCTURE



Source: World Bank World Development Indicators, 2017. [data.worldbank.org](http://data.worldbank.org)

# CHINA EMISSIONS TREND AND MITIGATION OPPORTUNITIES: IEA



# POLITICAL ECONOMY

## Drivers and Challenges of China's Green Growths

### Drivers

- New Normal Growth Stage and Economic Structure Change
- Pressing Air Pollution War
- Strong Political Commitment
- Public Need for Good Life Quality

### Challenges

- Stimulate economy growth and ensure employment
- Middle-class rise and policy boosting consumption
- Decarbonize industry and reduce materials intensity

### Mix

- Electrification of energy system (RE v.s. Coal)
- Consumer behaviors changes (e.g. e-commerce)
  - New Technologies (e.g. datacenter)

# CHINA IS MAKING PROGRESS ON ITS AGGRESSIVE DOMESTIC COMMITMENTS

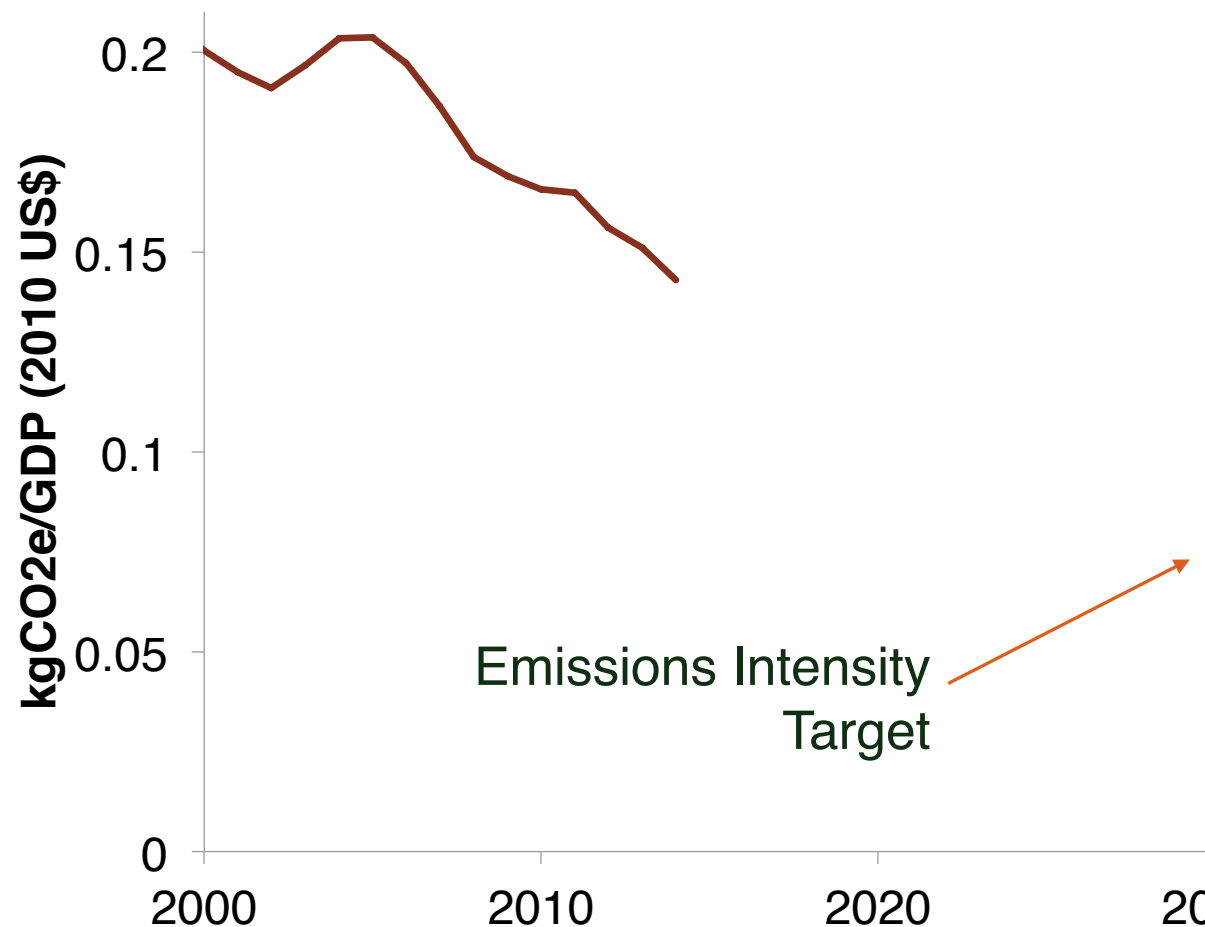
China's NDC:

Peaking emissions around 2030 and making best efforts to peak sooner

Reduce emissions intensity of GDP by 60-65% from 2005

Increase non-fossil primary energy to 20%

Increase forest stock by 4.5 billion m<sup>3</sup>



# CHINA'S POLICY EFFORTS

For example:

- Stage 6 Light Duty Vehicle Standards
- Proposed Room AC MEPS
- Renewable Energy Investment
- Largest EV Market

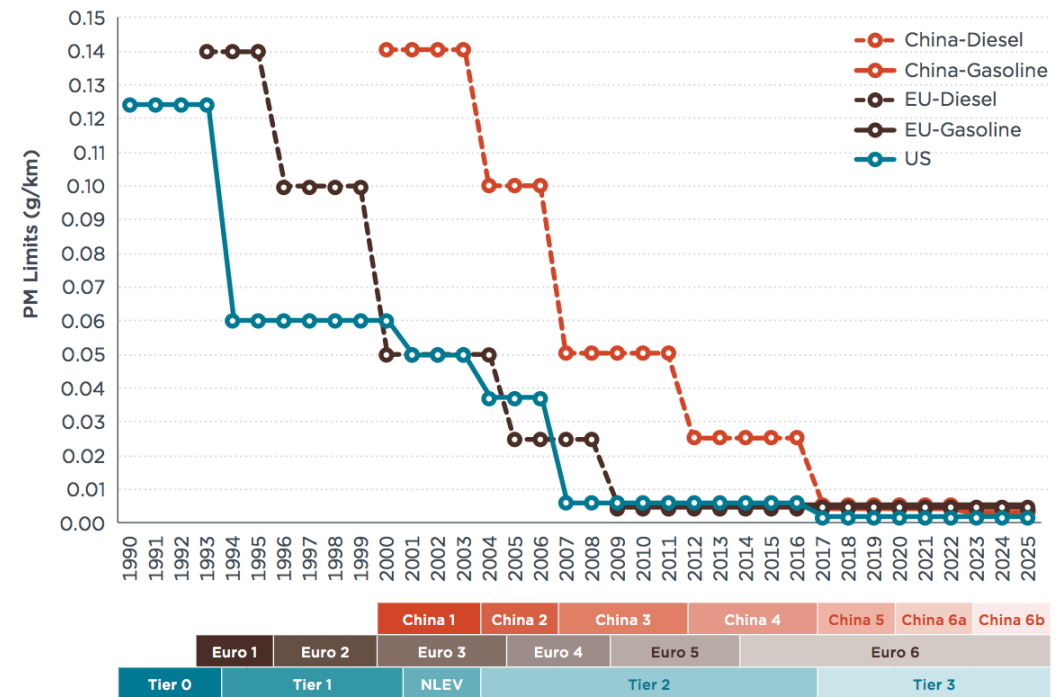


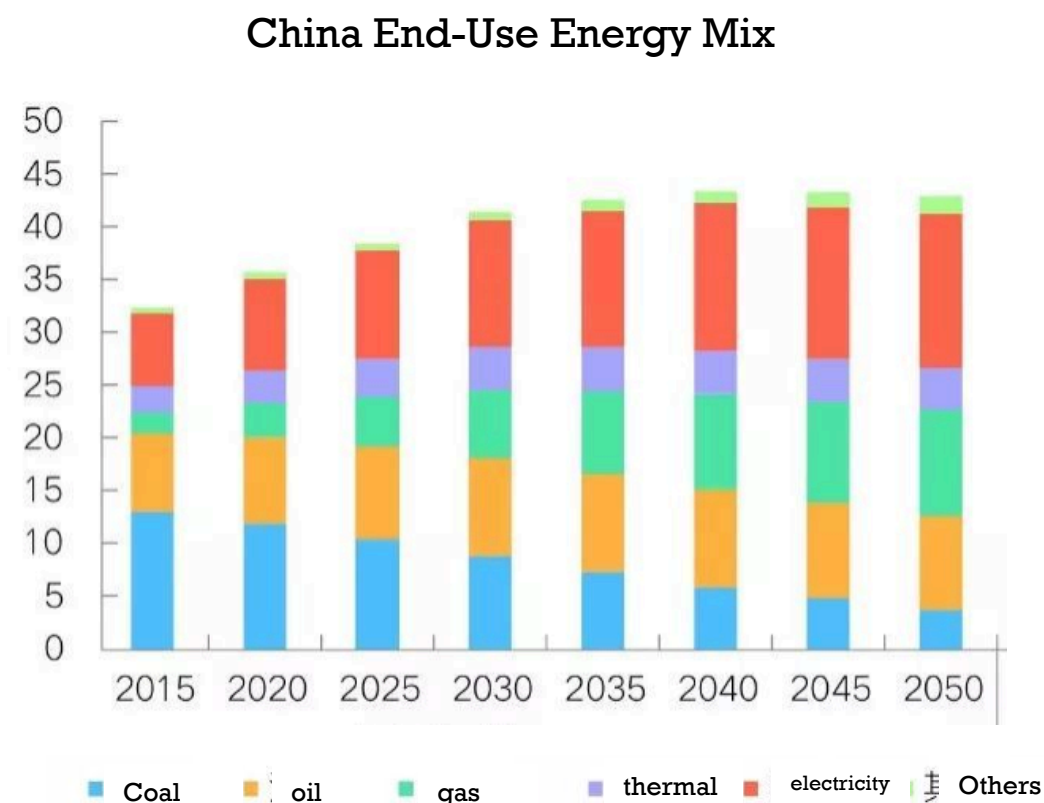
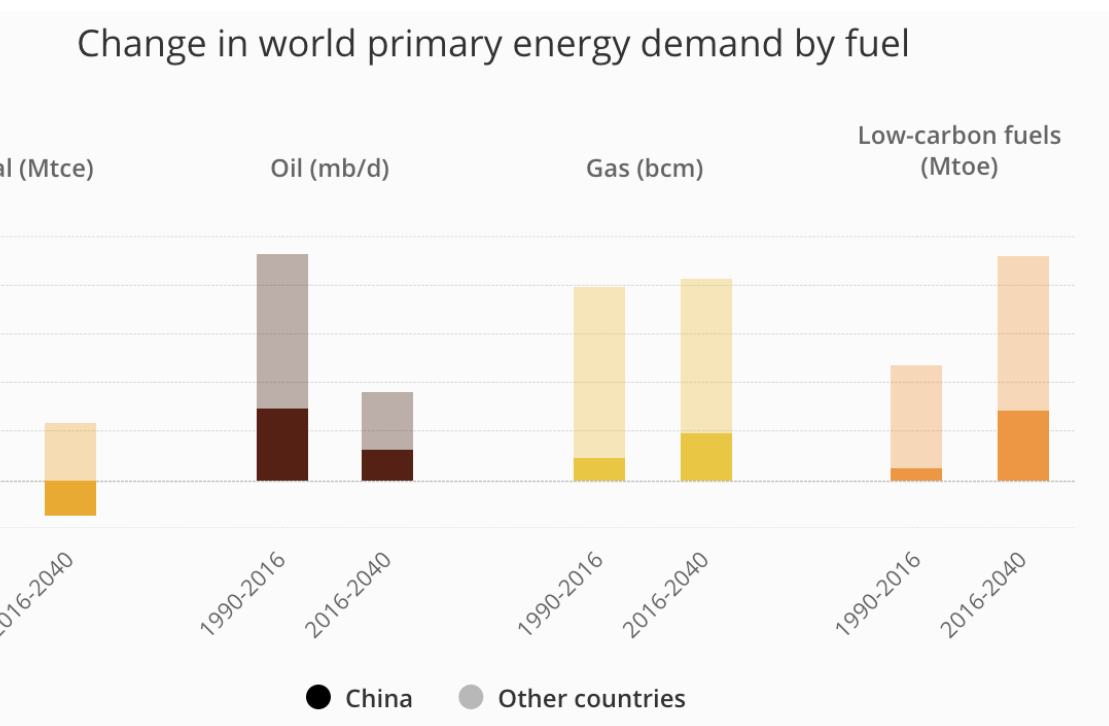
Figure 3. Comparison of PM emission requirements in China, the European Union, and the United States during 1990–2025.

# EU-CHINA COLLABORATION OPPORTUNITIES

- Low Carbon CITY – Madrid Central
- Electricity – Flexible Grid
- Circular Economy – Waste Management and Smart Design
- Cooling Efficiency (EE and HFC) – Included in President Xi-Macron joint declaration
- Etc.

# POWER:

- China leads the world in renewable energy though coal will continue dominate
- Electrification of the energy system

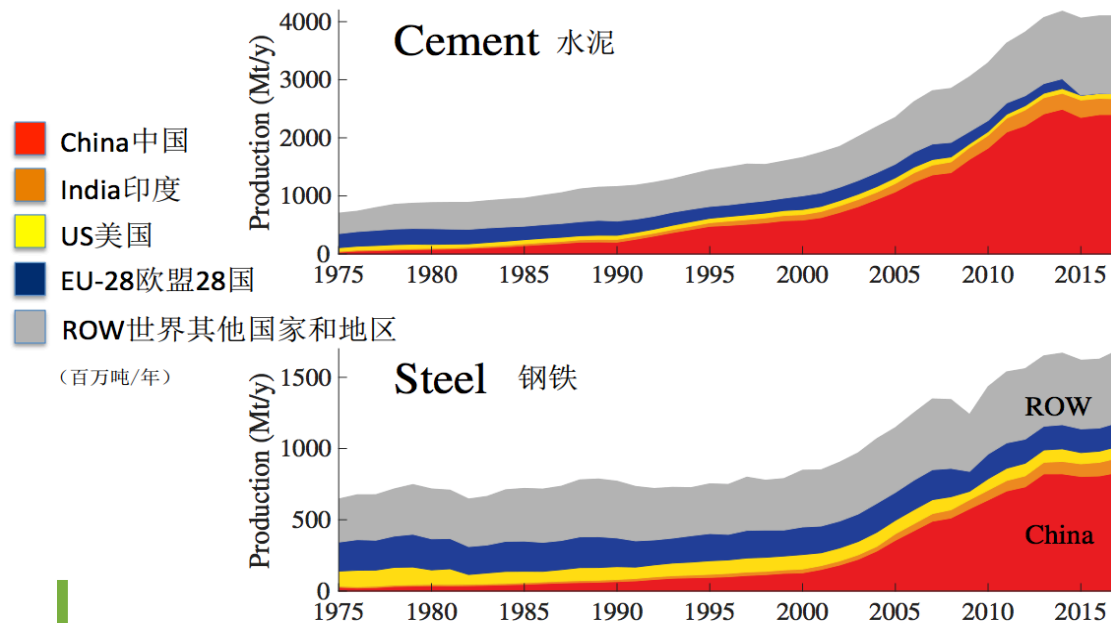




# INDUSTRY:

## - Decarbonize all industries

China produces half of the world's steel and cement. 全球一半的钢铁和水泥产自中国。



Source: WSA, 2017; USGS, 2016.

## MEASURES

- Increase energy efficiency of production
- Increase life of steel-intensive goods
- Increasing recycling
- CCS



# Product-service Intensity

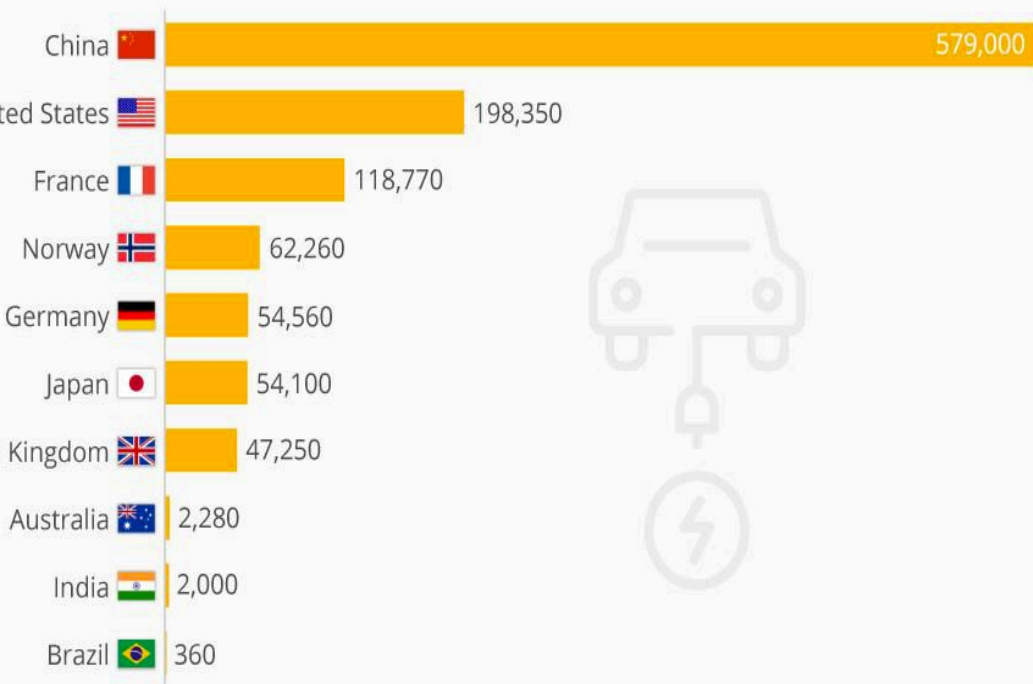
Investments and Durable Goods 投资及耐用品	Typical Lifetime in China 在中国的一般使用寿命	Typical Lifetime in High-Income Countries 在高收入国家的一般使用寿命
Buses 巴士	6-7 years (年)	12 years (年)
Taxis 出租车	600,000 km	750,000-800,000 km
Residential Buildings 住宅楼	33 years (年)	75-80 years (年)
Civil Engineering Works (roads, bridges, &c.) 土建项目 (道路、桥梁等)	30 years (年)	60 years (年)

# TRANSPORTATION

By 2040, one out of four cars on China's road would be electric.

## Electric Car Sales Are Surging In China

Electric vehicle sales (BEV and PHEV) by country in 2017\*



\* Selected countries. BEV - Battery electric. PHEV - plug-in hybrid.  
Source: International Energy Agency

Forbes statista

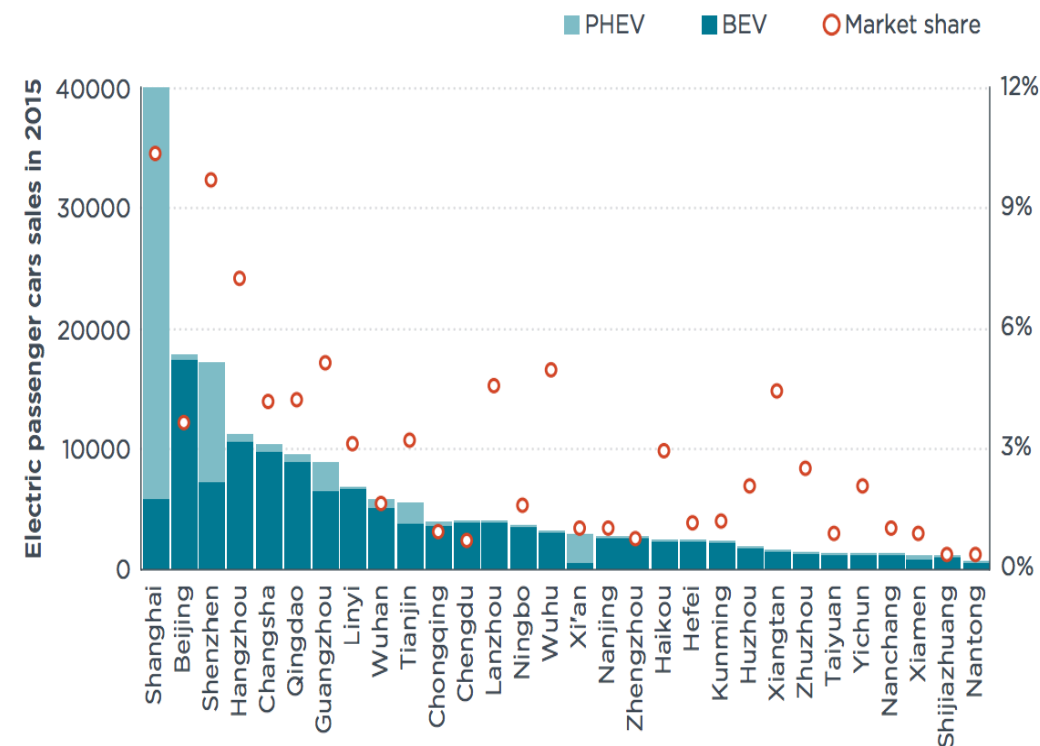
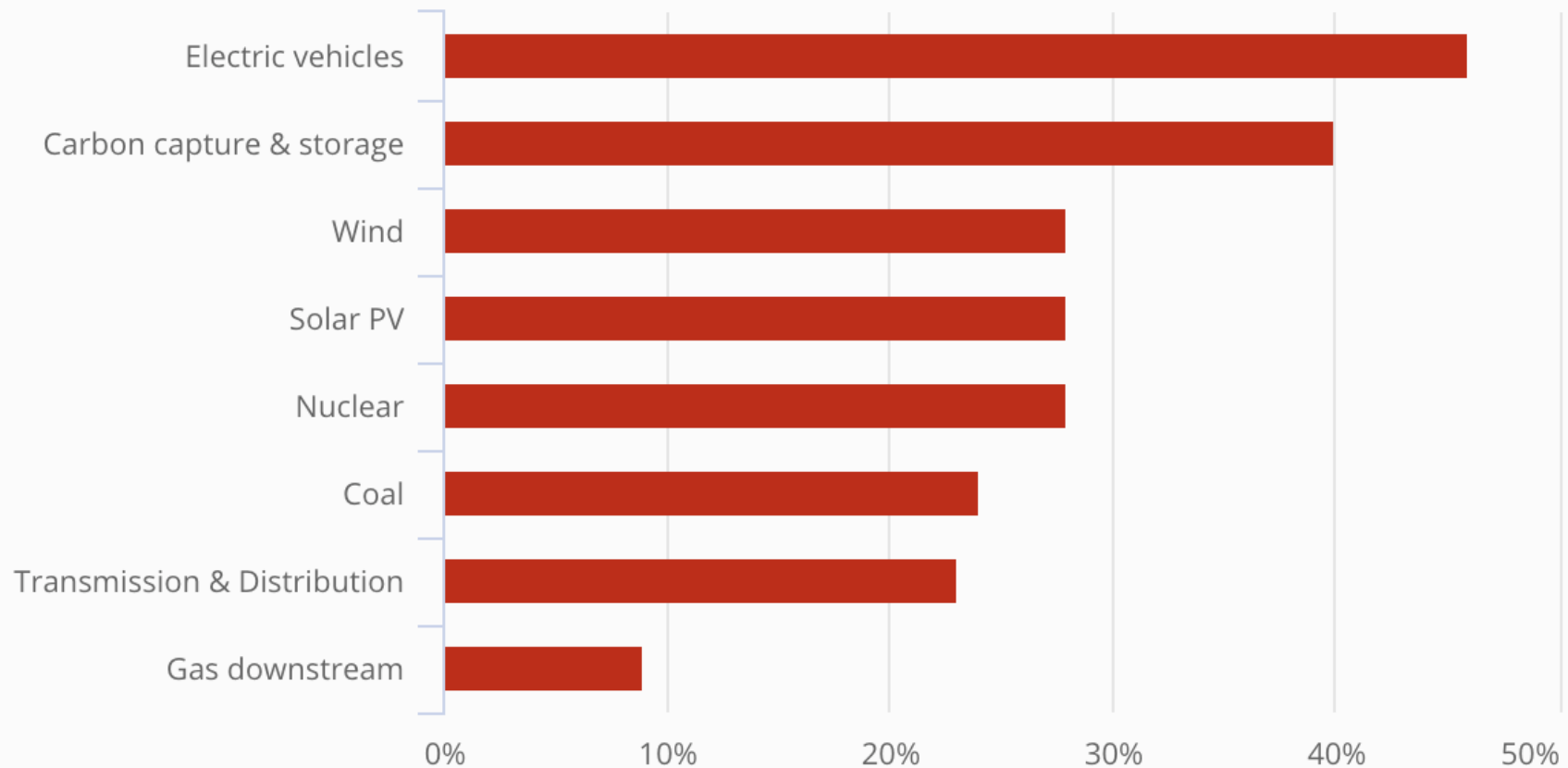


Figure ES 1. Electric car market size and penetration in 30 Chinese cities with leading electric car sales, 2015 (ordered according to total electric car sales).

Sources, ICCT

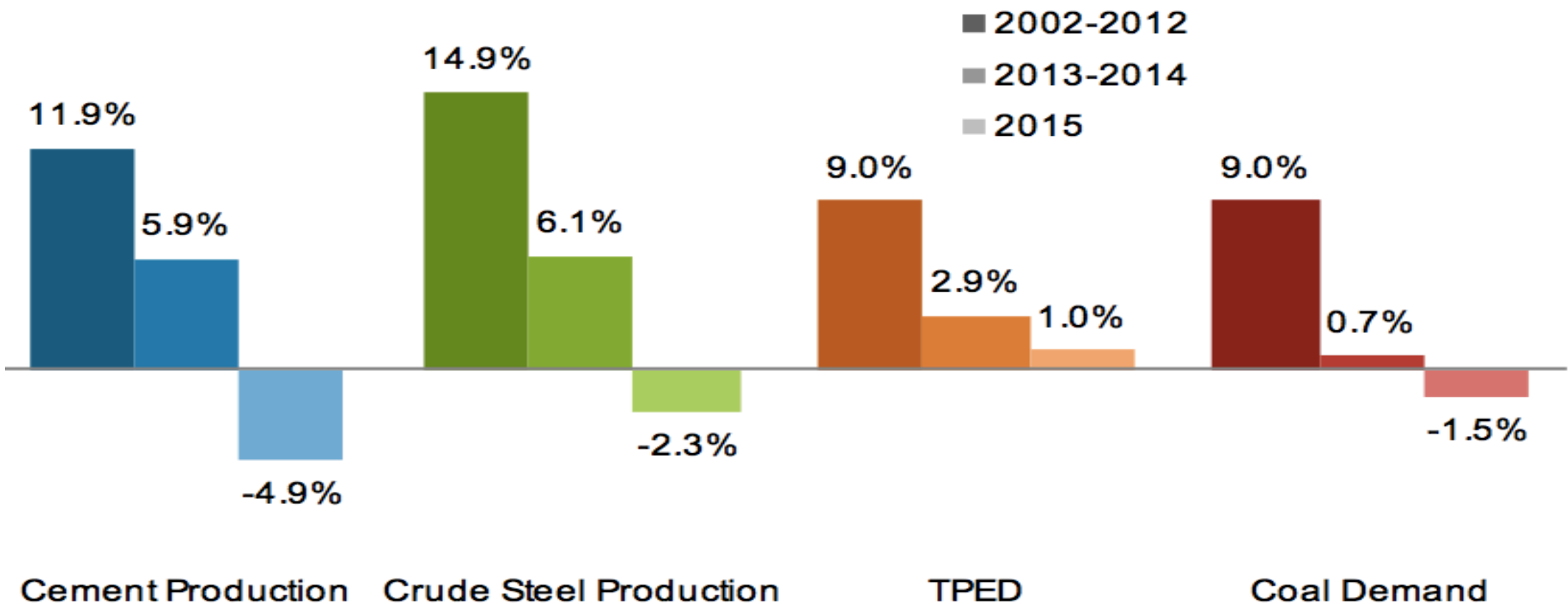
# INVESTMENT:

## China's Share Of Cumulative Global Investment In Selected Fuel & Technologies [*Projection Toward 2040*]



World Energy Outlook 2017, IEA

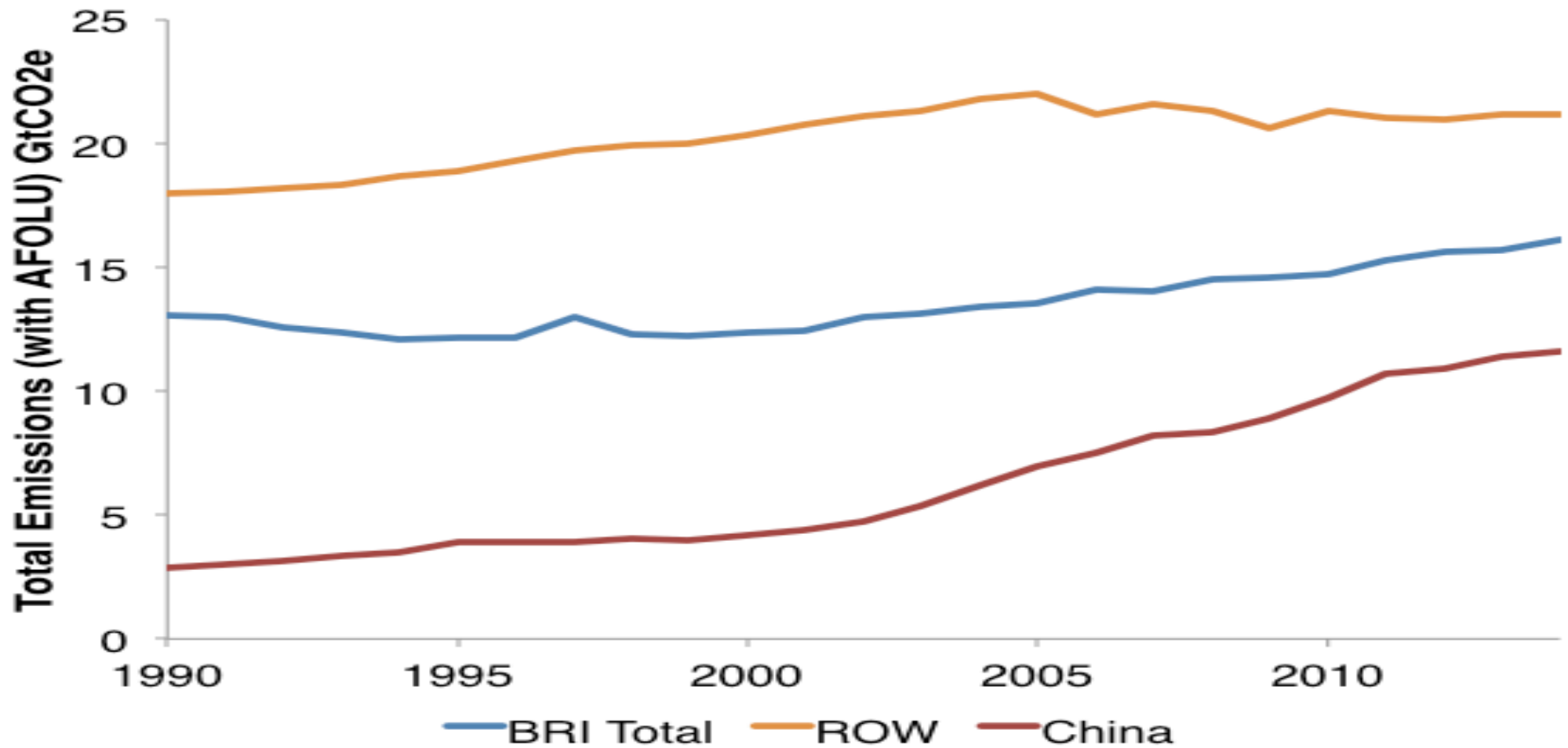
# CHINESE KEY ECONOMIC INDICATORS



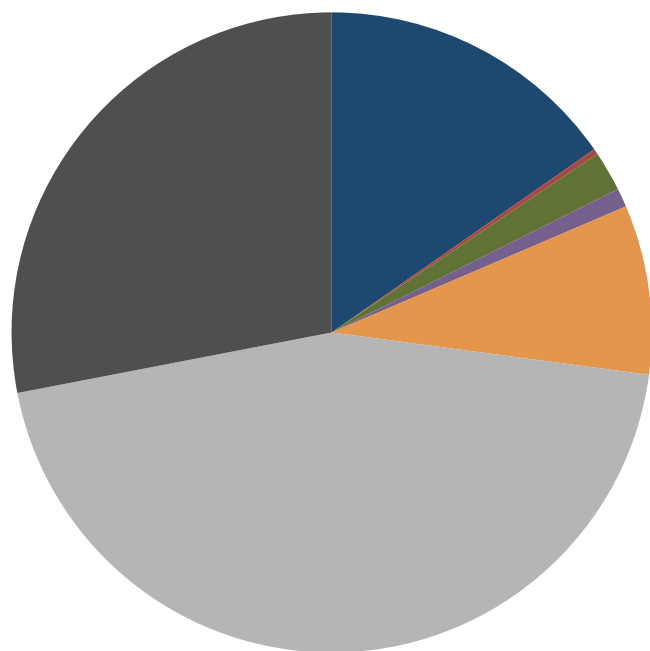
Source: Houser, Bordoff, and Marsters. "Can Coal make a Comeback?" Columbia SIPA Technical Report, April 2017, p30. <http://energypolicy.columbia.edu/research/report/can-coal-make-comeback>

绿色创新发展中心  
Innovative Green Development Program

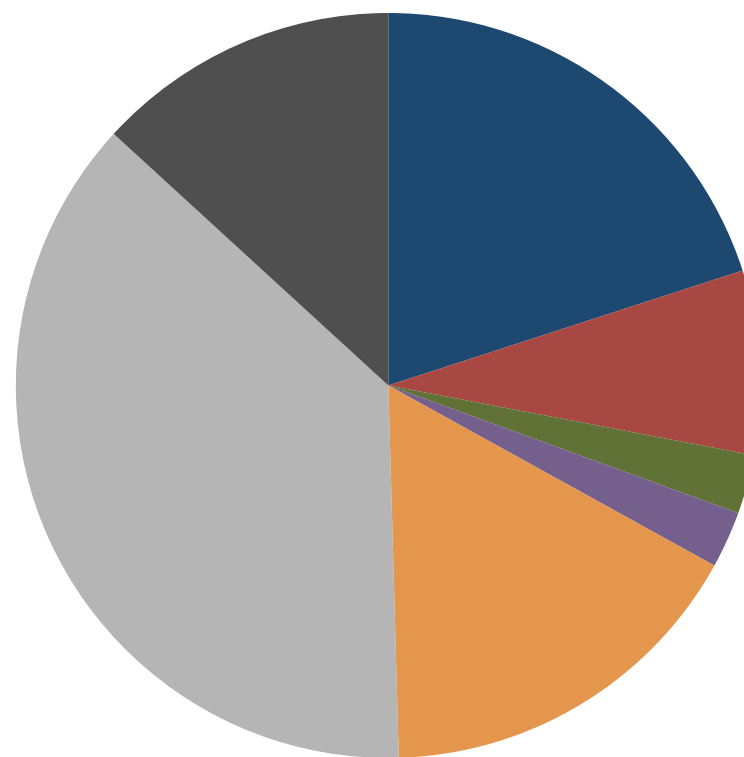
# THE BRI COUNTRIES ARE INCREDIBLY IMPORTANT FOR CLIMATE CHANGE



# CHINA'S OVERSEAS DEVELOPMENT FINANCE IS DIVERSIFYING AND GETTING CLEANER



Total: \$104 billion  
(2003-2013)



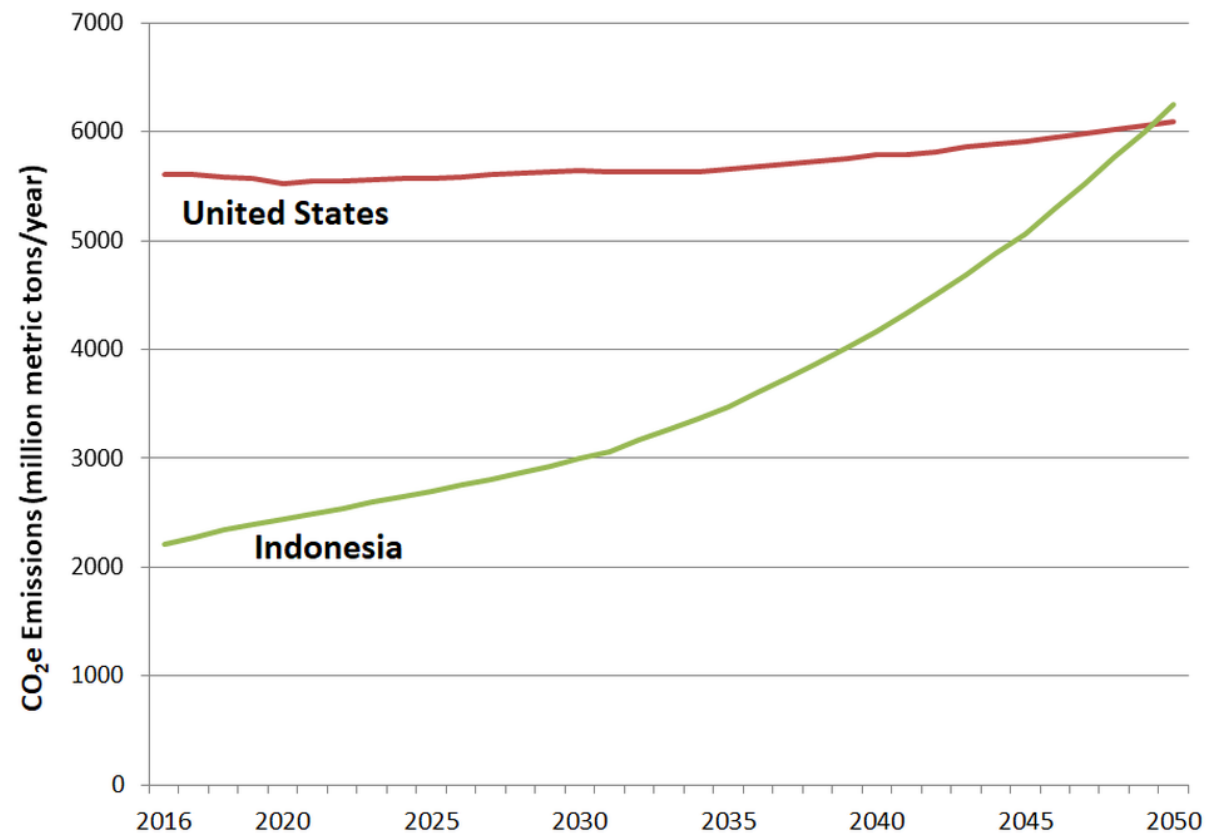
Total: \$121 billion  
(2014-2017)

- Hydropower
- Nuclear
- Solar/Wind
- Electric T&S
- Gas/LNG
- Oil
- Coal

# BRI POLICY COLLABORATION

## Where EU and china could collaborate

- Greening trade
- Soft Investment in BRI countries to help develop green policies
- Technical support in long term strategy planning
- Policy and strategy dialogues
- Pilots and capacity building





# THANK YOU!

■ [humin@igdp.cn](mailto:humin@igdp.cn)