The Chinese SOEs and low carbon energy transition

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Content of the Presentation:

- Chinese SOEs at a glance
- SOEs as energy producers and renewable energy development
- SOEs as energy consumers and Chinese carbon market
- Climate policy, energy policy, and pollution control policy: killing one bird with three stones?

Chinese SOEs at a glance

State-owned Assets Supervision and Administration Commission of the State Council

Central–SOEs: 103 corporations, total assets around 66.8 trillion RMB yuan, 60% of the assets are concentrated at electricity, petroleum, construction, military and telecommunication sectors

Local-SOEs: total assets 59.12 trillion RMB yuan

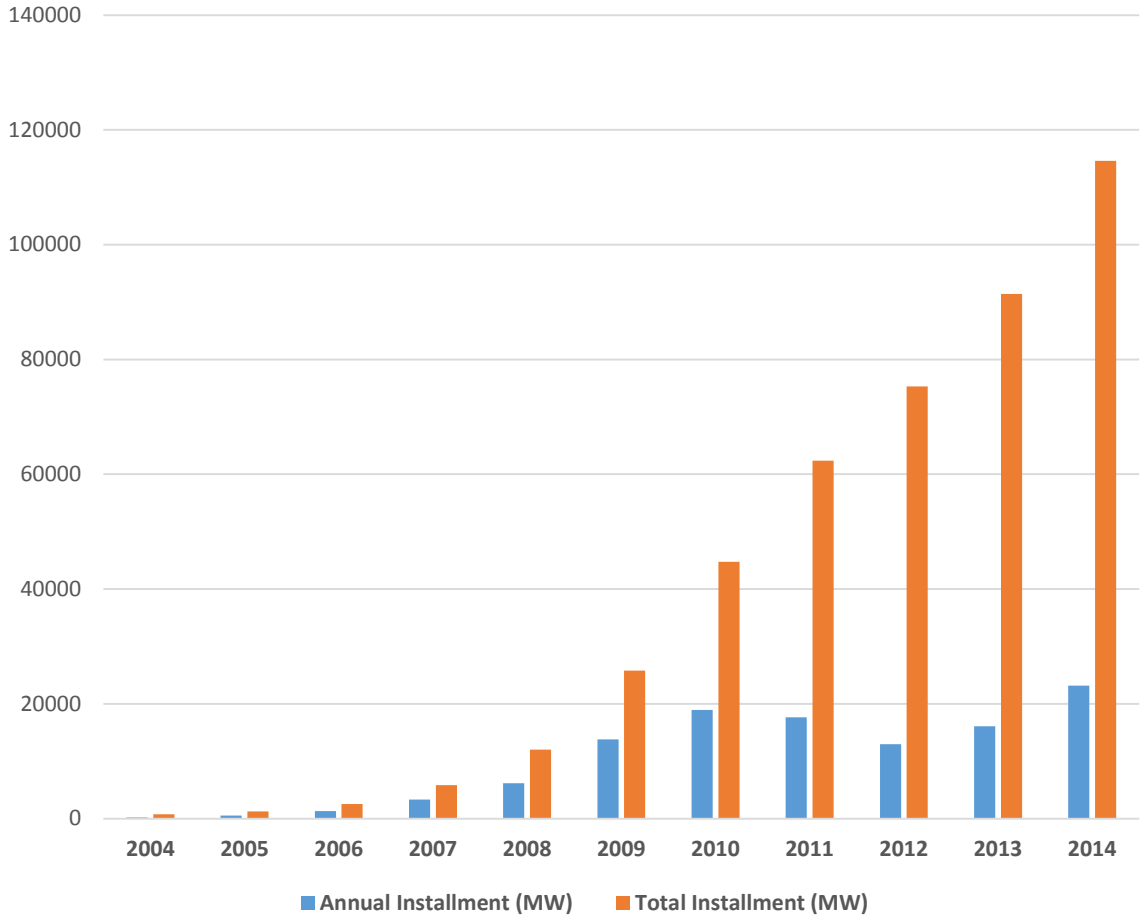
SOEs as energy producers: the Big 5 and others

	中国大唐集团公司 China Datang Corporation	中国国电 CHINA GUODIAN	中国华电集团公司 CHINAHUADIANCORPORATION	中国华能 CHINA HUANENG	中国电力投资集团公司 CHINA POWER INVESTMENT CORPORATION
Total capacity	**137.17 GW**	**135 GW**	**134.76 GW**	**160.63 GW**	**107.40 GW**
Renewable Capacity	38.78 GW	40.42 GW	50.03 GW	46.19 GW	43.03 GW
Renewable Percentage	30.49%	29.94%	37.12%	28.76%	40.06 %
Coal Consumption	309.62g/kwh	310.4g/kwh	308.5g/kwh	305.78g/kwh	307.5g/kwh

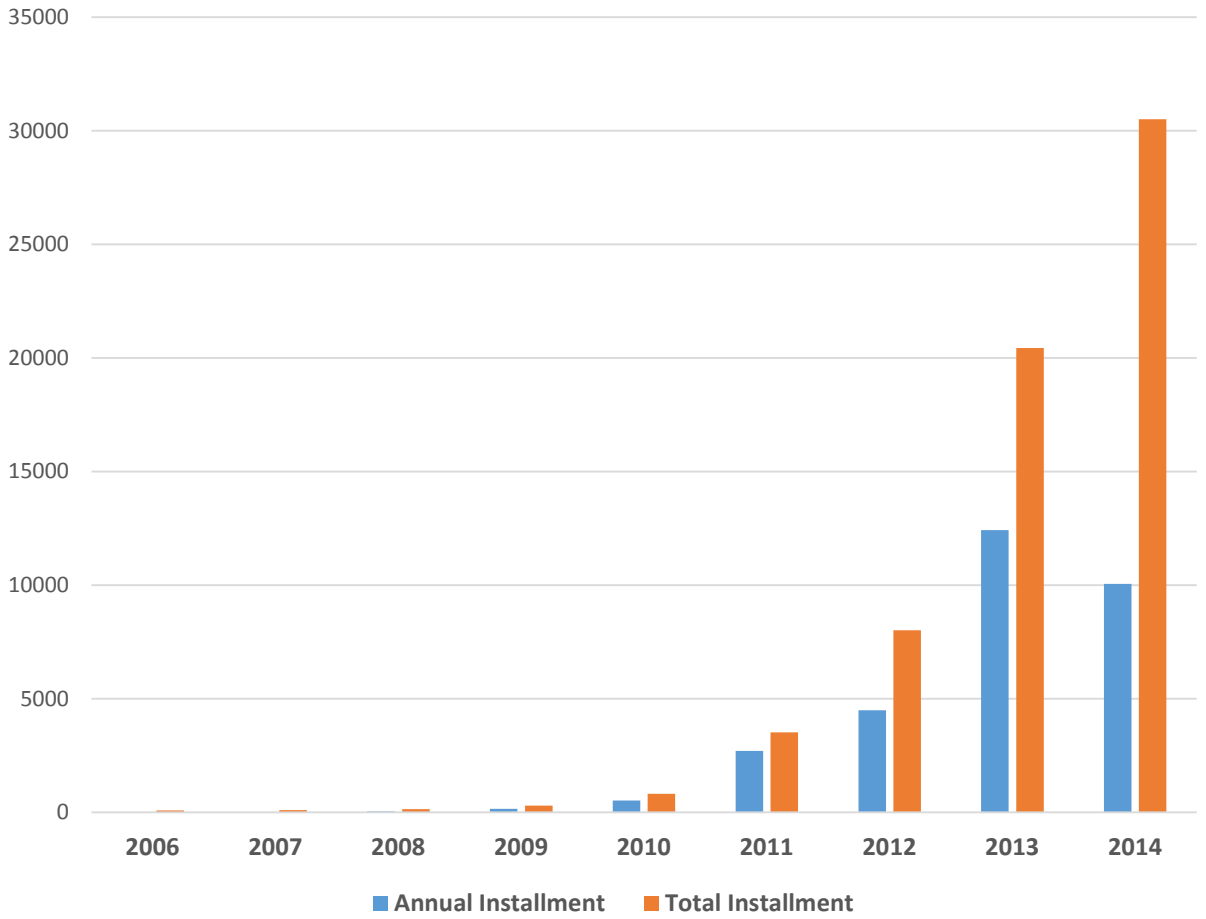
(Source: China Electricity Council)

China's domestic renewable boom:

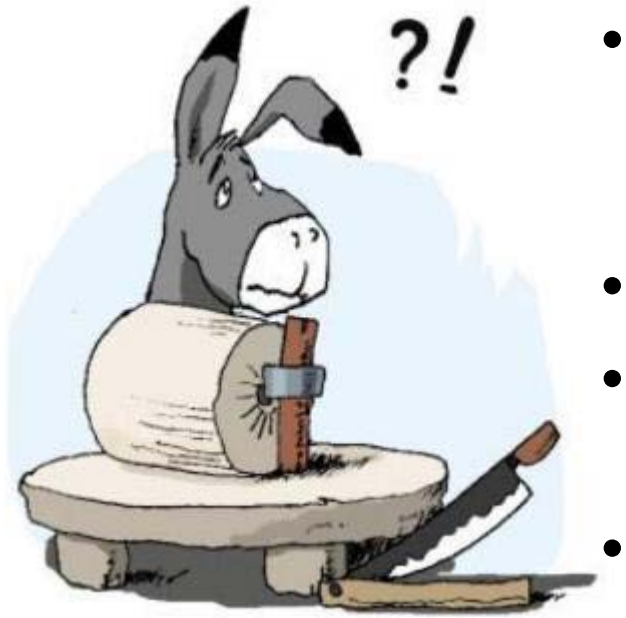
Wind capacity from 743 mw in 2006 to 114.6 gw in 2014



Solar capacity from 40 mw in 2008 to 28 gw in2014



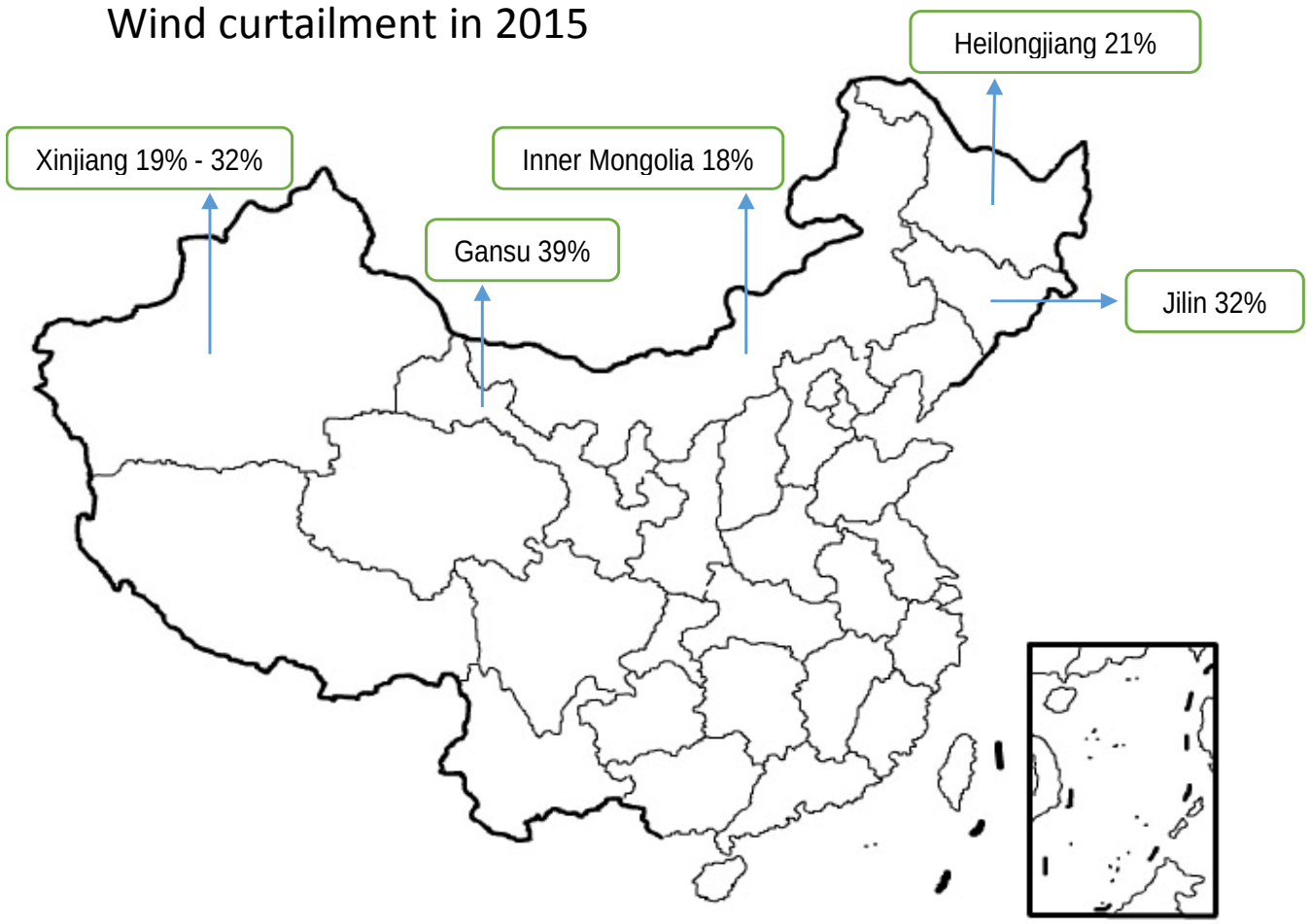
Wind energy sector in China



- Six rounds of concession bidding programmes by the Chinese government (2004 – 2010)
- Rise of Chinese SOEs and financiers
- Over 120gw projects being constructed within a decade
- Chinese wind turbine manufactures and wind farm developers dominate the market
- State-led industrial policy as another example of ‘development state’? (Chen and Lees, 2016; Mazzucato, 2013)

卸磨杀驴: [xièmóshālǘ]. Kill the donkey the moment it leaves the millstone, meaning to get rid of someone as soon as he has done his job.

Renewable energy sector at a cross road



(Source: National Energy Administration, 2015)

- Overdue subsidy will reach RMB 60 billion by 2016
- The gap will be increasing in the future
- No legal enforcement of renewable energy law
- Impact of a slowing economy

SOEs and Pollutants Control

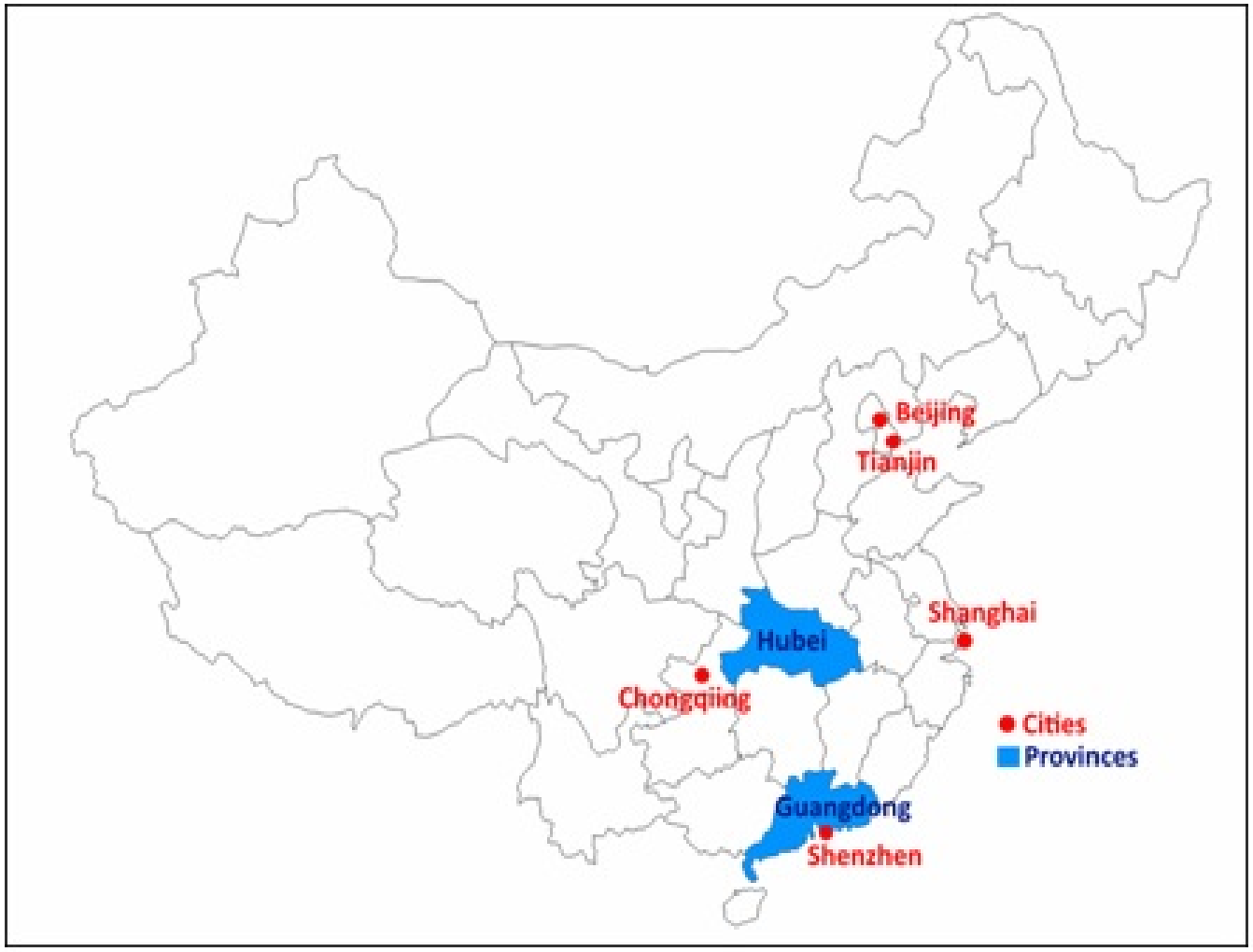
The most strict standard for pollutants control:

- By 2020, the average coal consumption rate will drop to 310gce/kWh
- For existing units with 600MW and above, 300gce/kWh average in 5 years
- For new units with 600MW and above, 285gce/kHh
- In some area, coal fired units will reach the same pollutant emission level with gas fired units (dust pollutant: 10mg/m^3; SO_2: 30mg/m^3, and NO_X: 50mg/m^3)

Shanghai Waigaoqiao No.3 Power Generation Co., Ltd.

Piloting emission trading schemes

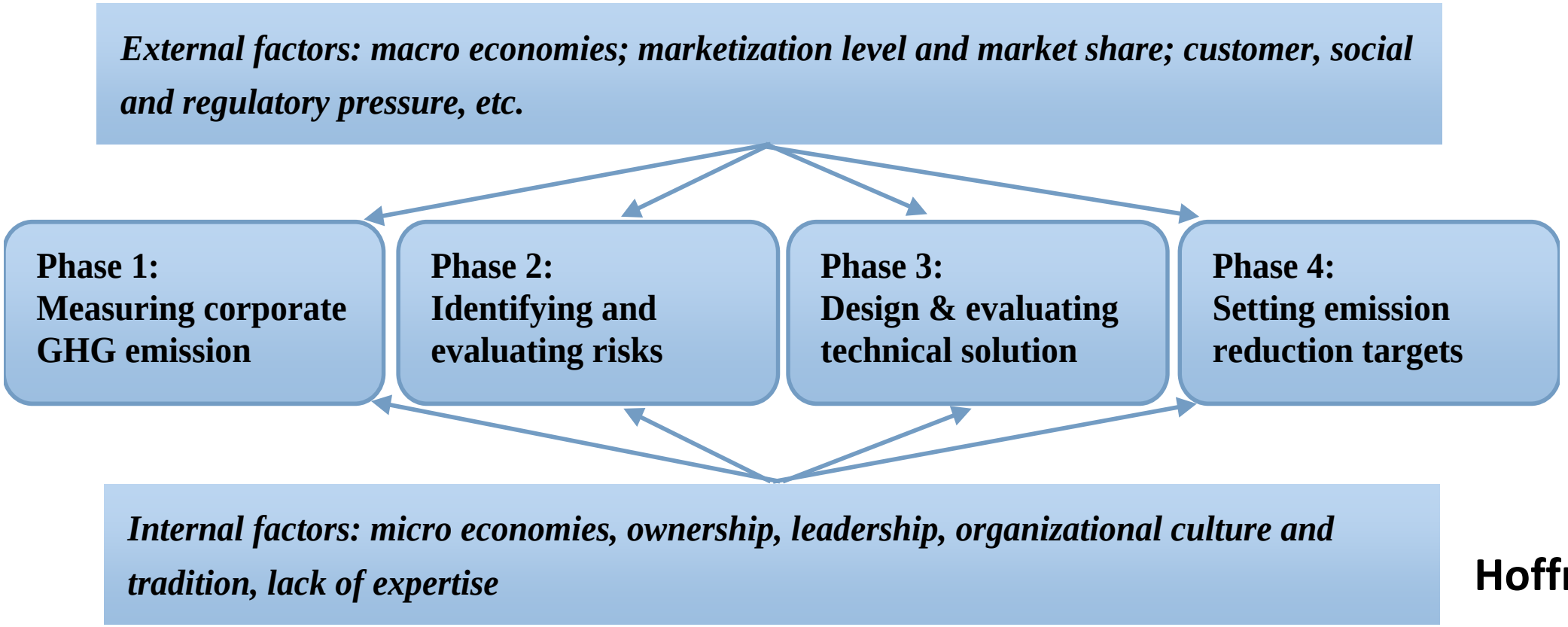
7 piloting ETSs were launched between June 2013 and June 2014



- 5 cities, 2 provinces
- 18% population
- 25% GDP
- 12% GHG emissions
- Over 1 billion tCO_2
- Over 2000 entities

Carbon markets and corporate climate strategy

Analyzing Chinese Companies' Climate Strategy: are SOEs are doing better?



Hoffman (2007)

Discussions

- SOEs as energy suppliers are ahead of the curve in the low-carbon energy transition
- SOEs as energy consumers are not
- Policy supports are stronger, with tougher regulations and attractive market prospects (in the last decade)
- Market and policy incentive from the energy consumers are not strong enough to leverage strategic change among SOEs
- Policy integration is needed, but inter-ministry and central-local coordination is a huge challenge even in an authoritarian state
- New challenges emerges when economy is slowing down

Thank you