# Development of Emissions Trading System in China: Why and How

DUAN Maosheng
Prof. and Director
China Carbon Market Center (CCMC), Tsinghua University
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# 1. Why China Embraces Emissions Trading

- Biggest GHG emitter and serious energy/environmental security concerns
- Various types of policy tools for GHG emissions control
- Long tradition of command-and-control policy
- Unexpected negative social consequences of command-and-control energy conservation policies
- Change of the big policy context
  - ✓ Comprehensive deepening of the reforms in China
  - ✓ Promotion of Ecological Civilization
  - ✓ Critical role of market in resources allocation

# 1. Why China Embraces Emissions Trading

- Market-based GHG mitigation approaches
  - ✓ Carbon Emissions Trading
  - ✓ Carbon tax
- Carbon tax
  - ✓ Supported by the financial, environmental protection and tax authorities
  - ✓ Proposed under the environmental protection tax law
- Carbon Emissions Trading
  - ✓ Proposed by National Development and Reform Commission, the energy saving and conservation authority
- Priority given to carbon emissions trading

# 2. Development of Carbon Emissions Trading in China

- Decision to pilot emissions trading in China in 2011 by National Development and Reform Commission in seven provinces and municipalities
- Decisions on emissions trading in various relevant documents issued by Chinese Government and CPC central committee
- “Crossing the river by feeling the stones” philosophy and tradition
- Now in the process of developing the national ETS which is expected to be operational in 2017

# 3. Key Elements of an ETS

## Basic Elements

- Coverage and Scope
- Emissions Cap
- Allowance Allocation
- MRV
- Compliance Rules

### Supporting Tools

- Registry
- GHG Emissions Reporting System
- Trading Platform

### Authorities

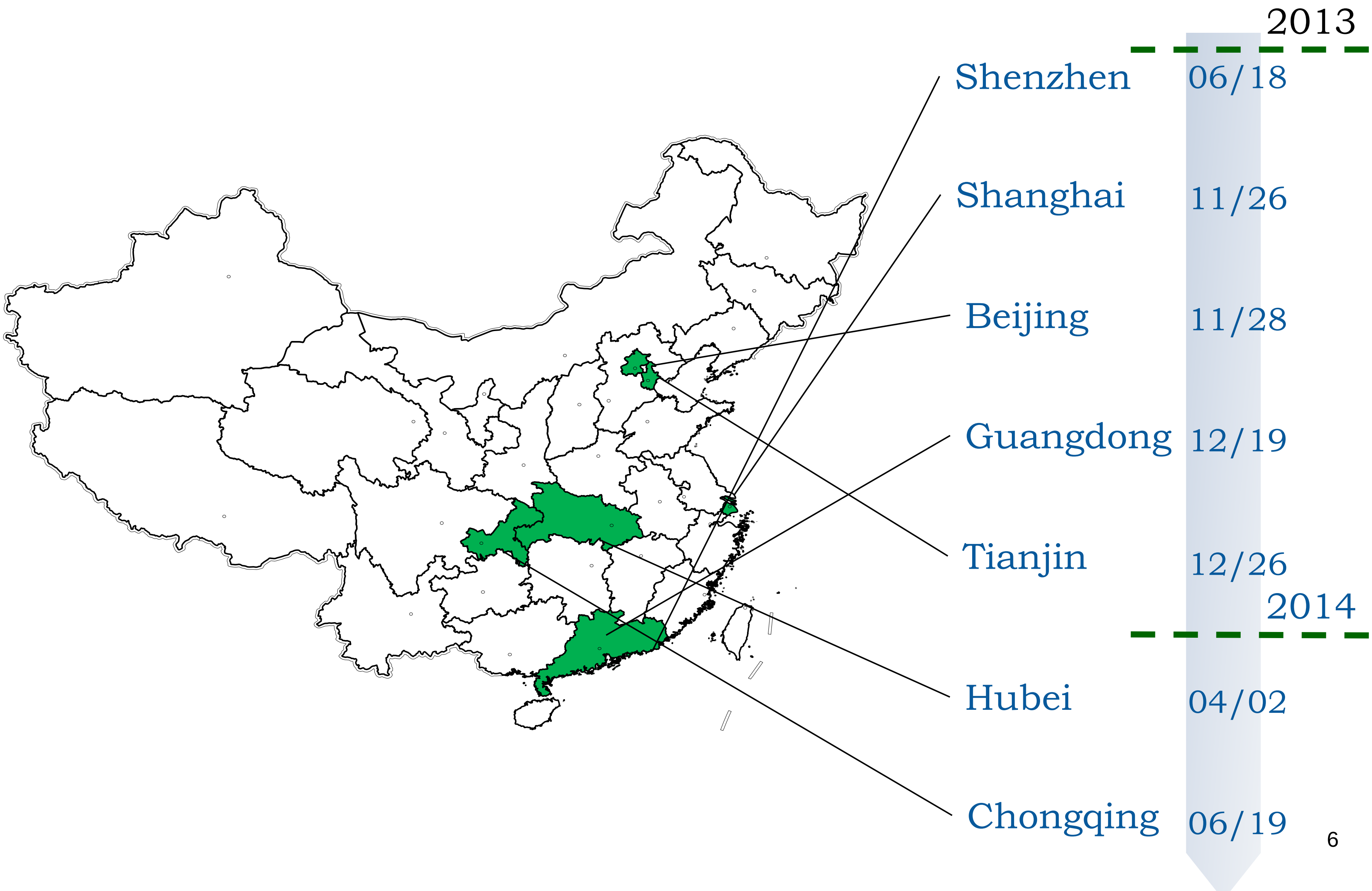
- ETS Authority
- Other Relevant Authorities
- Financial Institutions

### Adjustment Mechanisms

- Price Adjustment
- Tax Rules
- Banking and Borrowing
- Offsetting
- Linkage

## Legal Basis

# 4. Distribution of Pilot Regions



# 5. Coverage and Scope in Pilots

| | | Beijing | Tianjin | Shanghai | Hubei | Guang dong | Shenzhen |
|---|---|---|---|---|---|---|---|
| C | Electricity and Heat | √ | √ | √ | √ | √ | √ |
| | Iron and Steel | | √ | √ | √ | √ | √ |
| | Non-metal Processing Industry (cement, ceramics, etc.) | √ | | √ | √ | √ | |
| | Chemical Industry | | √ | √ | √ | | √ |
| | Petrochemical Industry | √ | √ | | | √ | |
| | Oil and Gas Exploration | | √ | | | | |
| | Non-ferrous Metals | | | √ | √ | | |
| | Textile and Paper | | | √ | √ | | √ |
| | Domstic Civil Aviation | | | √ | | | |
| | Transport Stations | | | √ | | | |
| | Service Industry (mainly buildings) | √ | | √ | | | √ |
| | Other Sectors | √ | | | √ | | √ |

# 5. Coverage and Scope in Pilots

| | Coverage Threshold | Number of Covered Enter. | Reporting Threshold |
|---|---|---|---|
| Beijing | 10,000 $tCO_2$ | ~490 | 2,000 tce |
| Tianjin | 20,000 $tCO_2$ | 114 | - |
| Shanghai | Industrial: 20,000 $tCO_2$<br>Non-Industrail:10,000 $tCO_2$ | 197 | 10,000 $tCO_2$ |
| Chongqing | 20,000 $tCO_2$ | 242 | - |
| Hubei | 60,000 tce<br>(~150,000 $tCO_2$) | 138 | - |
| Guangdong | 20,000t $CO_2$ | 202 | 10,000 $tCO_2$ or 5,000 tce |
| Shenzhen | 5,000t $CO_2$ | 635 | 3,000 $tCO_2$ |

# 5. Coverage and Scope in Pilots

- GHG gases covered
  - ✓ only $CO_2$ covered in 6 out of 7 pilots
  - ✓ Targeting the main gas
- Both direct and indirect emissions (consumption of electricity and heat) covered, i.e. double regulation
- Legal entities, rather than installations, covered by the system, mainly for data availability reason

# 6. Some Other Features of the Pilots

## 1) Emissions Cap

- Caps announced only in two pilots
- Some allowance reserved for possible auctioning
- Flexible real caps

## 2) Divergent Free Allocation Approaches

- Grandfathering
  - ✓historical emission-based
  - ✓Historical intensity and current production-based
- Benchmarking
  - ✓For the whole sector
  - ✓For new production capacities

# 6. Some Other Features of the Pilots

## 2) Divergent Free Allocation Approaches

- Ex-post adjustment of free allowances
- Responses to China-specific situations, e.g. heavy power sector regulation

## 3) Emissions Verification Arrangement

- Impartiality vs. need for financial resources
- Contractual relationship between the government and the third party verifiers
- Sustainability of the arrangement

# 6. Some Other Features of the Pilots

## 4) Diversified Compliance Rules

- Financial penalties
  - ✓3-5 times of the market value of the outstanding allowances
  - ✓Limit on the financial penalties in most pilot regions
- Credit system
- Eligibility for preferential policies, etc.
- Limitation caused by the legal basis in most pilots

## 5) Different Legal Basis

- Decisions by the provincial Legislatures
- Decisions by the provincial governments

## 6) Price adjustment rules

# 7. China's National ETS

1) To be operational in 2016/2017
2) Roadmap debate
3) *Interim Management Rules on Emissions Trading* published in December 2014 by China's National Development and Reform Commission (NDRC), China's ETS authority and also economic authority

# 7. China’s National ETS

4) National system with unified rules
5) Two-level management system
    - Central government
    - Provincial-level government
6) Central government in charge of rule setting

# 7. China's National ETS

7) Provincial-level government in charge of rule implementation
   - Identification of covered entities
   - Approval of monitoring plans
   - Determination of emissions of covered entities
   - Compliance assessment

8) Comprehensive and strict compliance rules

# 8. Challenges Facing ETS Establishment

1) Reliable data, especially verified emissions data
2) Necessary resources, e.g. financial, human resources
3) Necessary capacity, e.g. institutional and personal capacity
4) Sufficient legal basis
5) Coordination of different authorities

# Thanks

duanmsh@tsinghua.edu.cn