Experiences, recent developments
and outlook of the Chinese ETS

Perspective of SinoCarbon
# Overview of 7 ETS pilots in China

<table>
<thead>
<tr>
<th>Pilots</th>
<th>Industries included</th>
<th>Inclusion threshold (annual emission)</th>
<th>No. of Entities</th>
<th>Annual Allowances</th>
<th>Allocation methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shanghai</td>
<td>Industrial sectors: electricity, iron and steel, petrochemical, chemical, non-ferrous metal, building materials, textile, paper making, rubber and chemical fiber; Non-industrial sectors: airlines, airports, ports, shopping malls, hotels, commercial office buildings and railway stations.</td>
<td>Industrial enterprises: 20,000 tons, Non-industrial enterprises: 10,000 tons</td>
<td>191</td>
<td>160 million</td>
<td>Benchmark&amp; Grandfather</td>
</tr>
<tr>
<td>Shenzhen</td>
<td>Industrial (electricity, water, manufacturing industries, etc.) and construction sector</td>
<td>Industries: over 5,000 tons; Public buildings: 20,000 square meters; State organ office buildings: 10,000 square meters</td>
<td>Industries: 635; Buildings: 197</td>
<td>30.5 million</td>
<td>Benchmark&amp; Grandfather</td>
</tr>
<tr>
<td>Beijing</td>
<td>Electricity, cement, iron and steel, petrochemical, other industries and the service industry</td>
<td>Over 10,000 tons</td>
<td>543</td>
<td>-</td>
<td>Benchmark&amp; Grandfather</td>
</tr>
<tr>
<td>Guangdong</td>
<td>Electricity, cement, iron and steel, and petrochemical</td>
<td>Over 20,000 tons</td>
<td>184</td>
<td>388 million</td>
<td>Benchmark&amp; Grandfather&amp; Auction</td>
</tr>
<tr>
<td>Tianjin</td>
<td>Electricity, heat, iron and steel, chemical, petrochemical, and oil and gas exploration</td>
<td>Over 20,000 tons</td>
<td>114</td>
<td>160 million</td>
<td>Benchmark&amp; Grandfather</td>
</tr>
<tr>
<td>Hubei</td>
<td>Electricity, heat, non-ferrous metal, iron and steel, petrochemical, chemical, cement, motor making, glass making, chemical fiber, paper making, medical industry, food and beverage</td>
<td>Energy consumption over 60,000 tons of standard coal equivalent</td>
<td>138</td>
<td>324 million</td>
<td>Benchmark&amp; Grandfather</td>
</tr>
<tr>
<td>Chongqing</td>
<td>Electricity, Aluminum, Ferroalloy, Calcium Carbide, Caustic Soda, Cement, Iron &amp; Steel</td>
<td>Over 20,000 tons</td>
<td>242</td>
<td>125 million</td>
<td>Application</td>
</tr>
</tbody>
</table>
# 2014 compliance season (5 pilots)

<table>
<thead>
<tr>
<th>Pilot Area</th>
<th>Kickoff Date</th>
<th>Compliance deadline</th>
<th>Compliance Rate</th>
<th>Announcing Date</th>
<th>Compliance Measures</th>
<th>Punishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shanghai</td>
<td>2013.11.26</td>
<td>2014.6.30</td>
<td>100% (191/191)</td>
<td>June 30- announce the performance rate</td>
<td>Strength the communication; Training in advance; Allowance auction</td>
<td>None</td>
</tr>
<tr>
<td>Shenzhen</td>
<td>2013.6.18</td>
<td>2014.6.30</td>
<td>99.4% (631/635)</td>
<td>July 3-release the enterprise list, compliance (631) and non compliance (4)</td>
<td>Auction</td>
<td>Before July 10, 4 enterprises submit the allowance; No punishment</td>
</tr>
<tr>
<td>Beijing</td>
<td>2013.11.28</td>
<td>2014.6.15</td>
<td>97.1%</td>
<td>June 19- release non-compliance enterprise list (257)</td>
<td>On-site law enforcement; media exposure</td>
<td>No public information</td>
</tr>
<tr>
<td>Guangdong</td>
<td>2013.12.19</td>
<td>2014.7.15</td>
<td>98.9% (182/184)</td>
<td>July 15-announce the performance rate</td>
<td>Postpone compliance</td>
<td>2 enterprises have been punished</td>
</tr>
<tr>
<td>Tianjin</td>
<td>2013.12.26</td>
<td>2014.7.25</td>
<td>96.5% (110/114)</td>
<td>July 28-announce the performance rate</td>
<td>Postpone compliance</td>
<td>No punishment measure</td>
</tr>
</tbody>
</table>
In the first compliance season, trading in the pilot markets was active beginning in May 2014. The trading volume from May to July accounted for most of the volume in the whole trading period.
<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Shanghai</td>
<td>2013.11.26</td>
<td>2015.6.30</td>
<td>100% (191/191)</td>
<td>June 30- announce the performance rate</td>
<td>Strength the communication; Training in advance; Off-set mechanism</td>
<td>None</td>
</tr>
<tr>
<td>Shenzhen</td>
<td>2013.6.18</td>
<td>2015.6.30</td>
<td>99.7% (634/636)</td>
<td>June 30- announce the performance rate</td>
<td>Shenzhen Emissions Exchange temporarily opened on the weekend, from Jun 27 to 28.</td>
<td>No public information</td>
</tr>
<tr>
<td>Beijing</td>
<td>2013.11.28</td>
<td>2015.6.15</td>
<td>100% (415)</td>
<td>July 1- announce the performance rate</td>
<td>On-site law enforcement; media exposure;</td>
<td>None</td>
</tr>
<tr>
<td>Guangdong</td>
<td>2013.12.19</td>
<td>2015.6.23</td>
<td>100% (183)</td>
<td>July 9-announce the performance rate</td>
<td>Ordering the non-compliance entities to stop its usual business for internal adjustment.</td>
<td>None</td>
</tr>
<tr>
<td>Tianjin</td>
<td>2013.12.26</td>
<td>2015.7.10</td>
<td>99.1% (111/112)</td>
<td>July 13-announce the performance rate</td>
<td>Ordering the non-compliance entities to stop its usual business for internal adjustment.</td>
<td>No public information</td>
</tr>
<tr>
<td>Hubei</td>
<td>2014.4.2</td>
<td>2015.7.10</td>
<td>100% (138)</td>
<td>July 24-announce the performance rate</td>
<td>Postpone compliance</td>
<td>None</td>
</tr>
<tr>
<td>Chongqing</td>
<td>2014.6.19</td>
<td>No public information</td>
<td>No public information (242)</td>
<td>No public information</td>
<td>Postpone compliance</td>
<td>No public information</td>
</tr>
</tbody>
</table>
Trading in the second compliance season

Trading in the pilot markets was active beginning in March 2015, three months earlier than trading became active in the pilots during the first compliance season. The transaction time has been moved forward.

Daily Average Trading Volumes from January to June (10000 tons)

Trading Volumes in compliance period and non-compliance period (10000 tons)
Currently, the average price of Beijing Allowance is the highest (US$ 7.93/ton). The average price of Shenzhen Allowance is the second highest (US$5.47/ton). The average prices of other allowances are between US$2~4/ton.
What we have learned so far?

| Learning by doing, there's still a long way to build capacity |
| Infrastructure, e.g., MRV, Benchmarks, is essential |
| Industry Buy-in is of critical importance |
| Market liquidity relates to a robust and Sound ETS system |
| Early success in pilots gives confidence For advancing To the National ETS |
How to Evaluate the Carbon Market?

Evaluation criterion

- Trade volume, market size, liquidity?
- Experience accumulated, Infrastructures, Capacity Building, Awareness Raising?

Road map of National ETS

Bottom up, Regional ETS link to national wide
(from Pilot to National ETS)

Top down approach, national overall design
Roadmap of National ETS

National

- 2014
  - Draft proposal of National ETS Regulation
  - Release MRV guidelines
  - Strengthen infrastructure building

- 2015
  - Release National ETS Regulations
  - Promote history data reporting and verification

- 2017-2019
  - Phase I:
    - Launch of National ETS implementation

- After 2019
  - Phase II:
    - Expand coverage
    - Improve ETS
    - Research linkage to international ETS

Local

- Organize capacity building
- Identify key enterprise list and organize history emission reporting and verification
- Allocate allowance based on national rule

Enterprise

- Participate in capacity building
- Develop internal carbon emission accounting and reporting system
- Fulfill reporting obligation and cooperate on verification
- Non-covered enterprises could also get involved in carbon market through CCER trading

- Annual allocate allowance
- Annual reporting, verification and compliance
- Involve in national ETS improvement and innovation based on local situation

- Fulfill emission reporting and compliance obligation
- Improve carbon assets investment and management
- Voluntarily participate in carbon market trading and decrease emission reduction costs
- Involve in ETS improvement and innovation
On Jan 19, NDRC circulated a Landmark Notice. The Notice is so far the most comprehensive and specific guidance NDRC provides to all important stakeholders

- provincial level DRCs (copied to provincial governments)
- Civil Aviation Administration
- SOEs and major industry associations

It is based on experiences and feedbacks from local level, and provides an important tool to facilitate the mobilization of support and resources for advancing work on provincial level and also engage industries.

China doesn’t have a national legislation on ETS, so NDRC has to rely on the traditional way to push work at local level and engage enterprises. For example, copying the Notice to provincial governments is a backup for local DRCs to get necessary support.
The Notice paved the way for advancing the most important preparatory work, for collecting historical data and also producing the list of covered enterprises.

- **Scope of the national ETS:** enterprises whose annual energy consumption exceeds 10,000 tons of Coal Equivalent in any year from 2013 to 2015, from the following sectors, power (generation, cogeneration and grid), Petrochemical (crude processing, ethylene production), Chemical (Ammonia Production, carbide production, methanol production), building material (cement clinker production, plate glass production), Iron and Steel (crude steel production), Nonferrous Metal (electrolytic aluminum, copper smelting), Paper making (pulp production, paper making), and Aviation (passenger air transport, air cargo transport and airports).

- **Reporting base years:** 2013, 2014 and 2015
- **Reporting Templates:** all guidelines and templates for reporting are attached and available. For collecting additional data for purpose of benchmark setting and allocation, specific templates for all sectors are also provided.

- **Third Party Verifiers:** third party verification guidance and templates, criteria for selecting third party verifiers are provided.
The national MRV Q&A platform is formally launched
Stakeholders can ask any technical questions through online website and telephone hotlines and get the official answers from authorized experts. The platform will play a critical role for facilitate data reporting as it is the first time for most enterprises to report. The national Q&A platform also serves as the tool for ensure quality and consistency of data, which is critically important for a national unified ETS.

Specific timelines:
✓ Produce initial list of covered enterprises and submitted to NDRC by Feb. 29, 2016
✓ Finish historical and related data reporting and verification and all data submitted to NDRC by June 30, 2016
The PMR China Carbon Market Monitor provides timely information across the seven Chinese pilot carbon markets. It also provides analysis of climate policy and market developments at the national level.
Thank you for your attention!

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Member, UNFCCC Joint Implementation Supervisory Committee

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