Contents

1. Overview of GD ETS progress
2. ETS Mechanism Design Introduction
3. Challenge
4. Next work
GD-ETS target: up to 2015, GD-ETS can be on operation and try to form a regional carbon market with other province.

2011—2012
- ETS design
- Define the scope
- Reporting emission

2012–2013
Allocation MRV trading

2014–2015
Impact assessment of GD ETS
Operate better

2016–
- Inter-provincial carbon trade

Regional carbon market
1-2 Set up a multi-level leadership

Provincial leading group on climate change
Zhu XiaoDan, Governor of Guangdong Province

- Overall guild the climate change on Guangdong Province

Holding the joint conference on national low carbon pilot work
Xu Shaohua, Vice Governor of Guangdong Province

- Review the main work on low carbon pilot, and promote it.

Leading group on GD ETS pilot
Li Chunhong, Director of GD DRC

- Combined 12 departments, to coordinate GD ETS pilot work
(1) Research and design group

To study and design for carbon market
Involve institutes, colleges, third-part organizations and exchange
Including coordinating team, allowance team, MRV team and trading team.

(2) Working group

Ten persons from the above group working together in the GD DRC office
Help the GD DRC to review files and make the rules on GD ETS
To promote and implement the carbon trading market construction
1-4 Working roadmap

**Phase 1**
- Investigate and mechanism design
- GD ETS Work plan was public.
- The ceremony on GD ETS pilot was launched.
- Guangzhou carbon emissions exchange was set up.

**Phase 2**
- Complete the history carbon emission reports on four sectors
- Regulation on GD ETS
- Detailed rules and technical files
- Allowance allocation method
- Build three electric systems

**Phase 3**
- GD ETS will operate normally
- History carbon emission reports on more sectors
- Evaluation on GD ETS

**Timeline**
- 2012.09
- 2013.11
### 1-5 Key events

<table>
<thead>
<tr>
<th>Time</th>
<th>Key events</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011.10</td>
<td>Guangdong province was chose as the ETS pilot</td>
</tr>
<tr>
<td>2012.3~5</td>
<td>Investigate the ETS experience from EU, U.S.A., Australian and so on</td>
</tr>
<tr>
<td>2012.6</td>
<td>Set up four research and design groups</td>
</tr>
<tr>
<td>2012.8</td>
<td>Exchanging the experience with other ETS pilot in Zhuhai City</td>
</tr>
<tr>
<td>2012.9</td>
<td>GD ETS Work plan was public.</td>
</tr>
<tr>
<td></td>
<td>The ceremony on GD ETS pilot was launched.</td>
</tr>
<tr>
<td></td>
<td>Guangzhou carbon emissions exchange was set up.</td>
</tr>
<tr>
<td></td>
<td>Pre allowance were subscribed by the new cement plant</td>
</tr>
<tr>
<td>2012.11</td>
<td>The guidelines on carbon emission report in Guangdong province were reviewed by experts.</td>
</tr>
<tr>
<td>2013.2</td>
<td>The mobilization and training meeting on Guangdong provincial carbon emission report of key enterprises was held.</td>
</tr>
<tr>
<td>2013.3</td>
<td>The electric system on Guangdong provincial carbon emission report was on operation</td>
</tr>
<tr>
<td>2013.7</td>
<td>The regulation on GD ETS was public for comment</td>
</tr>
<tr>
<td></td>
<td>Complete the history carbon emission reports on four sectors</td>
</tr>
</tbody>
</table>
Contents

1. Overview of GD ETS progress
2. ETS Mechanism Design Introduction
3. Challenge
4. Next work
2-1 Management system frame

GD ETS Pilot Work Plan

- Regulation on allowance management and trading in Guangdong Province
  - Rules on carbon emission report and validation in Guangdong Province
    - Enterprises list involved in the GD ETS
    - Technical guideline on carbon emission report for power, cement, steel, petrochemical and other sector
  - Rules on allowance management in Guangdong Province
    - Guangdong provincial allowance allocation methods and results (2013-2015)
    - Regulation on the assets from selling allowance
## 2-2 Scope

<table>
<thead>
<tr>
<th>Sector</th>
<th>Enterprises complied in ETS</th>
<th>Enterprises reporting carbon emission for ETS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First phase</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>Up to 20000 CO₂ per year</td>
<td>71</td>
</tr>
<tr>
<td>Cement</td>
<td></td>
<td>From 10000 to 20000 CO₂ per year</td>
</tr>
<tr>
<td>Steel</td>
<td></td>
<td>84</td>
</tr>
<tr>
<td>Petrochemical</td>
<td></td>
<td>65</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td><strong>total</strong></td>
<td>229</td>
<td></td>
</tr>
<tr>
<td><strong>Next phase</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ceramics, textile, nonferrous metal, plastic, paper</td>
<td>Up to 20000 CO₂ per year</td>
<td>From 10000 to 20000 CO₂ per year</td>
</tr>
<tr>
<td>transportation</td>
<td></td>
<td>to be confirmed</td>
</tr>
<tr>
<td>building</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2-3 New entrant and quit

New entrants

up to 20000 CO$_2$ per year in these sectors

Quit enterprises

Annual carbon emission below 20000 CO$_2$ in the period
If it quit, the rest allowance should be recycle.
GD carbon emission Target: to reduce 19.5% based on 2010 emission level, Sector policy and sector development planning.

2-4 The Cap

The cap for power, cement, steel and petrochemical sector

The total allowance for existing enterprises and new entrants in every sector

The allowance for every enterprises from 2013 to 2015
The CAP setting complies with the characteristics of GD province developmental stages; under the constraint of current emission from existing enterprises, the designers shall reserve space for new entrants, optimize emission space and promote the development of low carbon.

The allowance allocation scheme guarantees that the existing enterprise carbon emission decreases year by year, the carbon emission growth of new entrants is under control, and the key enterprises play an important role in slowing down GD total carbon emission growth.

The allowance allocation oriented enterprises promote energy conservation and carbon emission reduction, close down the out-of-time production facilities, control the carbon emission from new projects, and facilitate the sector structure adjustment.

Allowance subscription market and allowance trading market depend on and influence each other, government guide and market conduct coordinate with each other, explore GD province local carbon trading mechanism, and activate carbon trading market.
Constraint the current emission, reserve space for new entrants

2-6 The total allowance
Different sectors/process abide by different rules of allocation

<table>
<thead>
<tr>
<th>Sector</th>
<th>Benchmark</th>
<th>Grandfather</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>Pure electricity</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Cogeneration</td>
<td>●</td>
</tr>
<tr>
<td>Cement</td>
<td>Clinker</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Grinding</td>
<td>●</td>
</tr>
<tr>
<td>Steel</td>
<td>Long process</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Short process</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>●</td>
</tr>
<tr>
<td>Petrochemical</td>
<td></td>
<td>●</td>
</tr>
</tbody>
</table>

Benchmark: allowance = historical activity level \(\times\) benchmark

Grandfather: allowance = historical emission \(\times\) correction factor
2-8 Compliance cycle

Submit carbon emission report

Validation report by DOE

Municipal DRC verify the two reports

GD DRC issue allowance of the year

GD DRC write off the surrendered allowance

Surrender the allowance (including CCER)

GD DRC audit the enterprise carbon emission

3.31

5.10

6.1

6.25

6.30

7.1

6.20
The entities is allowed to use some CCER to offset their emission.

The limitation of offset coming into the GD ETS should lower than 10% of the total allowances.
Up to now, the electronic system of carbon emission is set up in Guangdong; The main enterprises in the four sectors have reported their emission of the past three years. As the time is urgent, it’s a carbon emission inventory. More collect, less validation. Next step, The monitoring plan must be submitted, and the actual emission of the year will be validated strictly.
Contents

1. Overview of GD ETS progress
2. ETS Mechanism Design Introduction
3. Challenge
4. Next work
3 challenge

The common problems the seven pilots faced

- Inadequate legitimate base
- Statistics and accounting system of national and local greenhouse gas emission has not been developed
- The data quality of enterprise carbon emission is poor
- Awareness and capacity of carbon emission management and trading is insufficient

The challenge GD pilot faced

- Under the overall management of the provincial government, municipal governments play their role in GD ETS.
- The unbalanced development of districts
- The carbon emission is large in amount, involves diverse industries and complicated circumstances
Contents

1. Overview of GD ETS progress
2. ETS Mechanism Design Introduction
3. Challenge
4. Next work
4 Next work

- Call for a series of panel meetings among experts, enterprises, and relevant sectors; broadly listen to suggestions and advices from diverse parties.

- Report to NDRC climate division

- Call for joint conference to discuss and examine the related matters of authorized carbon emission management and trading, and make provincial decision

- Organize enterprise training and online simulation trading

- Launch authorized carbon emission trading market

- Organize and deploy the carbon emission inventory of the other sectors