

# Status of China's regional trading programs

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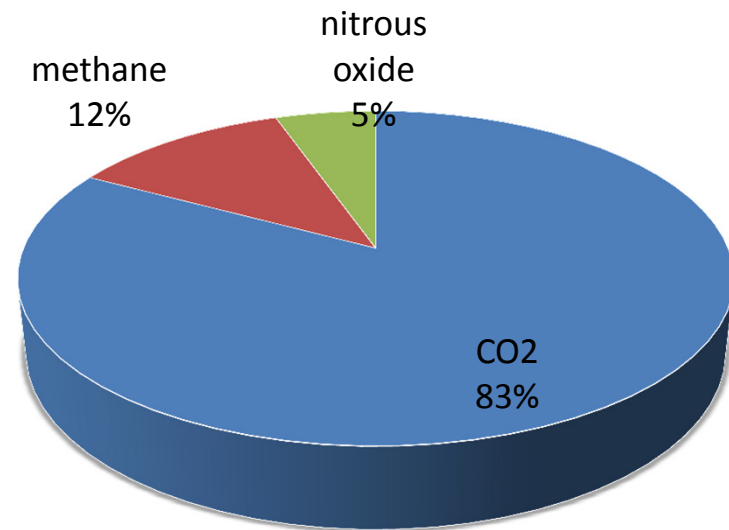
- Background
- Pilot project at local level
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# Background

- Policy context, objectives and envisioned role for new market instruments
  - China set the target to reduce its CO<sub>2</sub> emissions per unit of GDP by 40–45 per cent by 2020 compared with the 2005 level.
  - A binding target of reducing the CO<sub>2</sub> emissions per unit of GDP by 17% during the 12th Five-Year Plan period was established.
  - China initiated low carbon pilot projects in five provinces and eight cities.
  - The National People's Congress approved Outline of the 12th Five-Year Plan, which clearly mentions that China will establish statistical and verification systems for GHG emissions and gradually establish a carbon emissions trading system.

# Background

- Overview of China's GHG emission
  - According to China's National Program on Climate Change, China's total GHG emissions in 2004 were 6.1 billion tons of CO<sub>2</sub> equivalents.
  - After removing the amount of carbon sink, the net emission of GHG in China in 2004 was 5.6 billion tons of CO<sub>2</sub>e.
  - China is still at a lower stage of development with a huge population.



GHG emissions in 2004 in China

# Background

- Interest in carbon market

- Emissions trading could help achieve the objective of controlling GHG emissions at lower costs.
- The Government of China will, according to the requirements of the Outline of the 12th Five-Year Plan, gradually establish a market system for carbon emissions trading to promote the achievement of its carbon intensity reduction objective.
- The National Development and Reform Commission (NDRC), is prompting with great efforts the establishment of a carbon market.
  - To promote trading of voluntary credits generated on a project-by-project basis
  - To organize relative provinces and municipalities to introduce emissions trading systems.
  - Try to establish a unified national system in 2015.

# Background

- Key relevant initiatives
  - Strengthening local capacity to compile local greenhouse gas inventories
    - NDRC has published guidelines for compilation of provincial greenhouse gas inventories, and initiated the work on the compilation of local greenhouse gas inventories.
  - Plans to organize research on guidelines for emission accounting for key sectors
    - NDRC is now organizing research on the methodology for emission accounting for key sectors, and will publish guidelines for emissions calculation.

# Pilot project at local level



- **Why these regions?**
  - **Level of economic development**
    - Relatively development
    - Strong economic power
    - Large carbon emission volume
  - **Potential market volume**
    - Large cap
    - Many market players
    - Trading volume

# Pilot project at local level

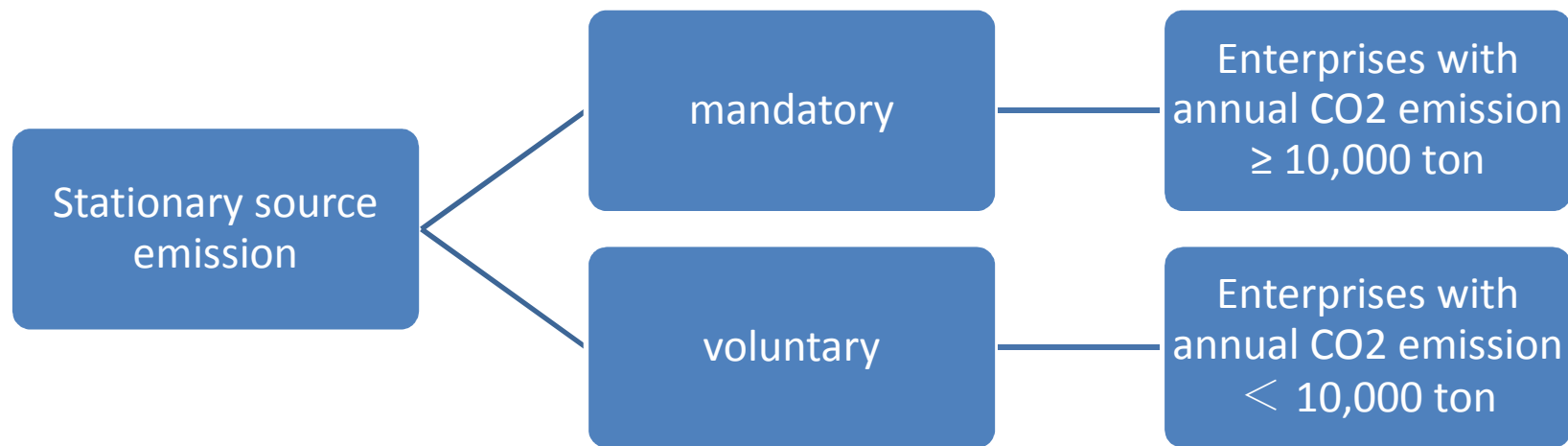
## Key index of pilot project provinces

|           | GDP per capita<br>(RMB) | rank | Energy intensity<br>(tce/10,000 RMB) | rank |
|-----------|-------------------------|------|--------------------------------------|------|
| Beijing   | 71935                   | 1    | 0.582                                | 1    |
| Tianjin   | 71012                   | 2    | 0.826                                | 7    |
| Shanghai  | 65334                   | 3    | 0.712                                | 3    |
| Chongqing | 27472                   | 14   | 1.127                                | 14   |
| Guangdong | 44070                   | 6    | 0.664                                | 2    |
| Hubei     | 27876                   | 12   | 1.183                                | 20   |



# Pilot project at local level

- Beijing– published “**Proposal on the regulatory framework for the pilot emission trading scheme**”
  - Trade subject: enterprises with stationary source emission
  - GHGs included: CO<sub>2</sub>
  - Trade system: under construction, prior to local exchange



# Pilot project at local level

- Cap
  - Account CO2 emission cap according to the target of carbon per unit of GDP reduced by 18% during 2011 to 2015
- Allocation
  - Free allowance of 2013 will be allocated according to average annual emission of 2009-2011
  - Little allowance will be auctioned by government
  - Enterprises should submit allowance annually. Allowance can't be borrowed and will be cleared by the end of 2015.

# Pilot project at local level

- MRV
  - Reporting system for enterprises entered into mandatory carbon market.
  - To publish “GHG accounting guideline” for various sectors
  - Appointed public and private energy service companies (ENSCos) to take on the responsibilities for the monitoring and auditing of the energy consumption in the city
  - Report GHG inventory at enterprise level including accounting methodology and monitor method adopted.
    - The report should be verified by the 3<sup>rd</sup> party.

# Pilot project at local level

|           | <b>2020 GHG emission</b>                               | <b>Industries covered</b>  | <b>Allocation</b>             | <b>Register system</b> | <b>MRV</b>  | <b>Regulation</b>          |
|-----------|--|--|-------------------------------|------------------------|---|----------------------------|
| Beijing   | GHG inventory, model forecast                          | ≥ 10,000 ton CO <sub>2</sub> e                                     | Average emission of 2009-2011 | Draft                  | Energy consumption report                                 | Published                  |
| Tianjin   | Forecast   | Industries with high energy consumption                            |                               | Draft                  | Database of emission factors                              |                            |
| Shanghai  | Forecast   | Under investigation (same to Beijing)                              |                               | Framework established  | Report system according to sectors                        | Draft under discussion     |
| Hubei     | 2020 GHG emission report                               | Under investigation  | Under discuss                 | Research report        | Draft “MRV regulation”                                    | Draft incentive regulation |
| Guangdong | 2015 GHG emission forecast (tech + economic structure) | Industries with high energy consumption                            | New entrance and existing     |                        | National key energy consumption enterprises investigation |                            |
| Chongqing | Accounting report                                      | Enterprises with annual emission beyond 20,000 ton CO <sub>2</sub> |                               | Under design           | Draft technical report                                    | Draft under discussion     |

# Pilot project at local level

## Exchanges in China

|                           | Beijing        | Tianjin                                   | Shanghai                                    | Chongqing | Guangdong | Hubei |
|---------------------------|----------------|---|---|-----------|-----------|-------|
| carbon trade              | √              | √   | √   |           |           |       |
| CDM business              | √              | √   | √   |           |           |       |
| voluntary reduction trade | √              | √   | √   |           |           |       |
| pollutant emission trade  | √              | √   | √   | √         | √         | √     |
| EMC                       | √              | √   | √   |           |           |       |
| methodology               | panda standard | energy efficiency methodology in building | China voluntary emission reduction standard |           |           |       |

# Challenges and Problems

- Lack of legislation
- Impact to industries, especially to power industries
- Allocation
  - Rule of fair and transparent to be achieved
  - Allocation to new entrance
- Cross-regional trade
- Unified emission trading system be established

Thanks for your attention