

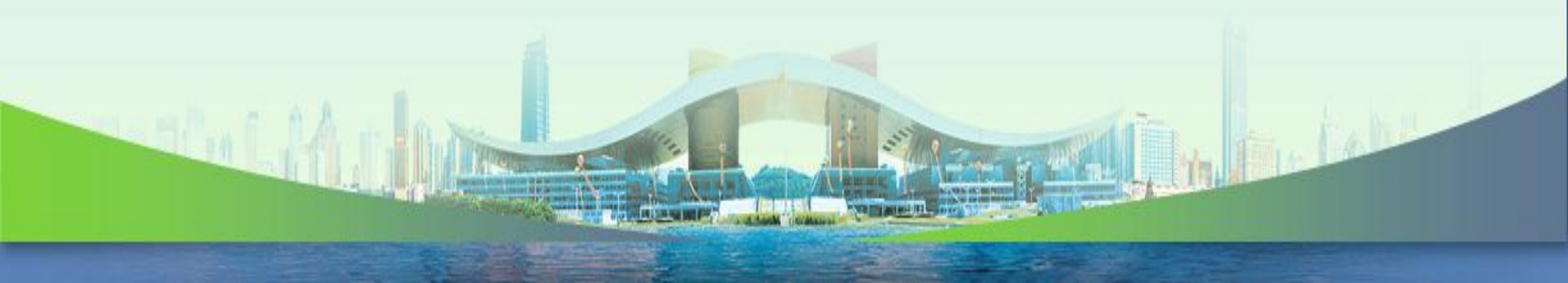
# Shenzhen carbon emissions trading scheme

2013.9.11



# Outline

- **1 Economic and environmental status in Shenzhen**
- **2 The Framework of Shenzhen ETS design**
- **3 Major features of the Shenzhen ETS**
- **4 Direction and prospect**



# 1 Economic and environmental status in Shenzhen



Shenzhen is a major city in the south of Southern China's Guangdong Province, situated immediately north of Hong Kong, established in 1979 , covers an area of 1991.64 square kilometres.

# 1 Economic and environmental status in Shenzhen

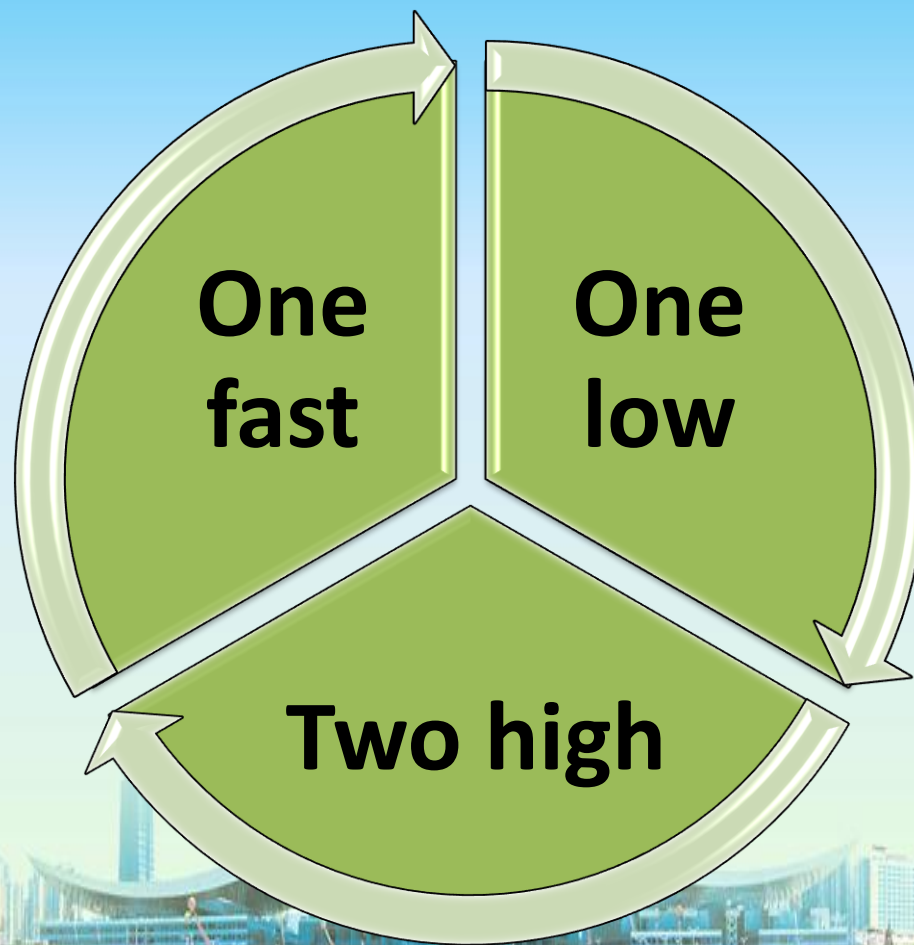
## Comprehensive economic strength

- **\$205 billion GDP**
- **\$19,450 per capita**
- **major by hi-tech industry, advanced manufacturing and high-end services**

## Economic development trend

- **industrial structure transition**
- **secondary industry upgrade**
- **export-oriented and domestic-driven growth**

# 1 Economic and environmental status in Shenzhen

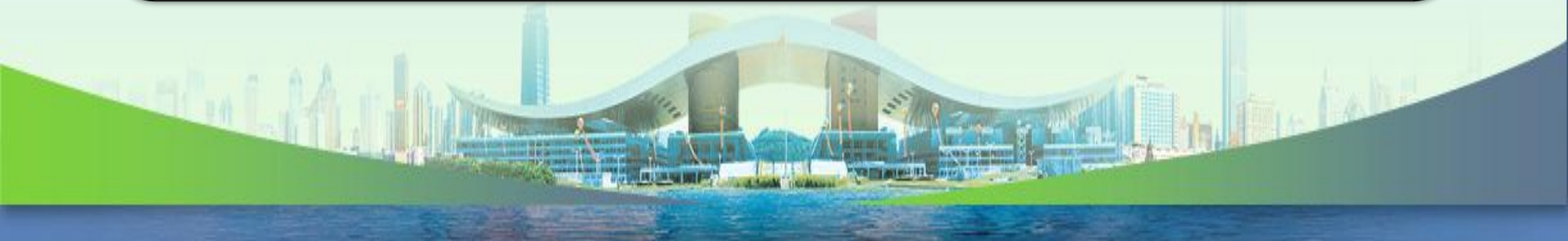




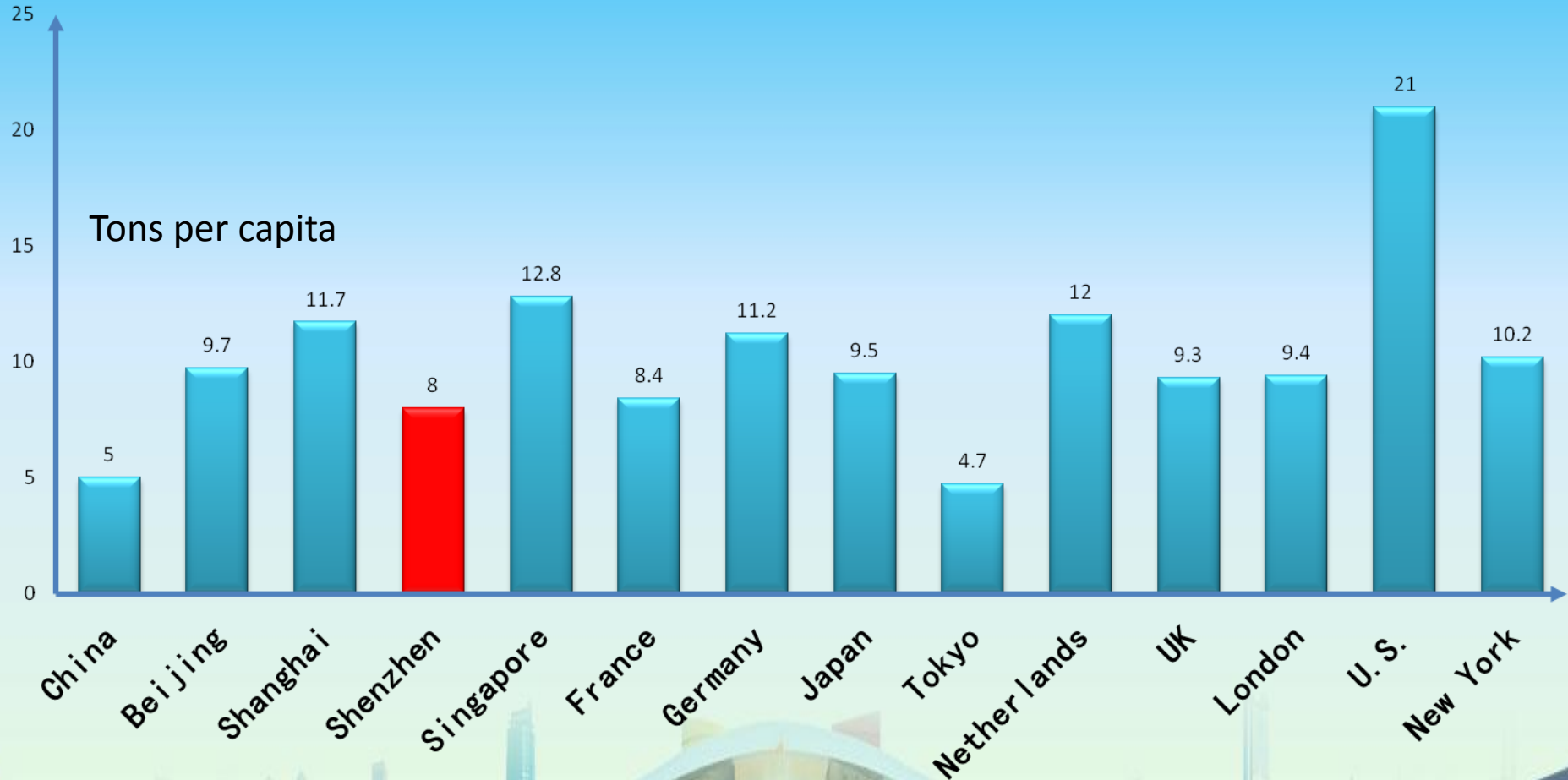
# One low

The total GHG emissions has increased from 60 to about 80 million tonnes CO<sub>2</sub>-e during 2005-2010, with an average annual growth rate of 4.9%.

The carbon emission per capita is at a level of 8 tonnes CO<sub>2</sub>-e while the carbon emission per unit GDP is continuing to fall.

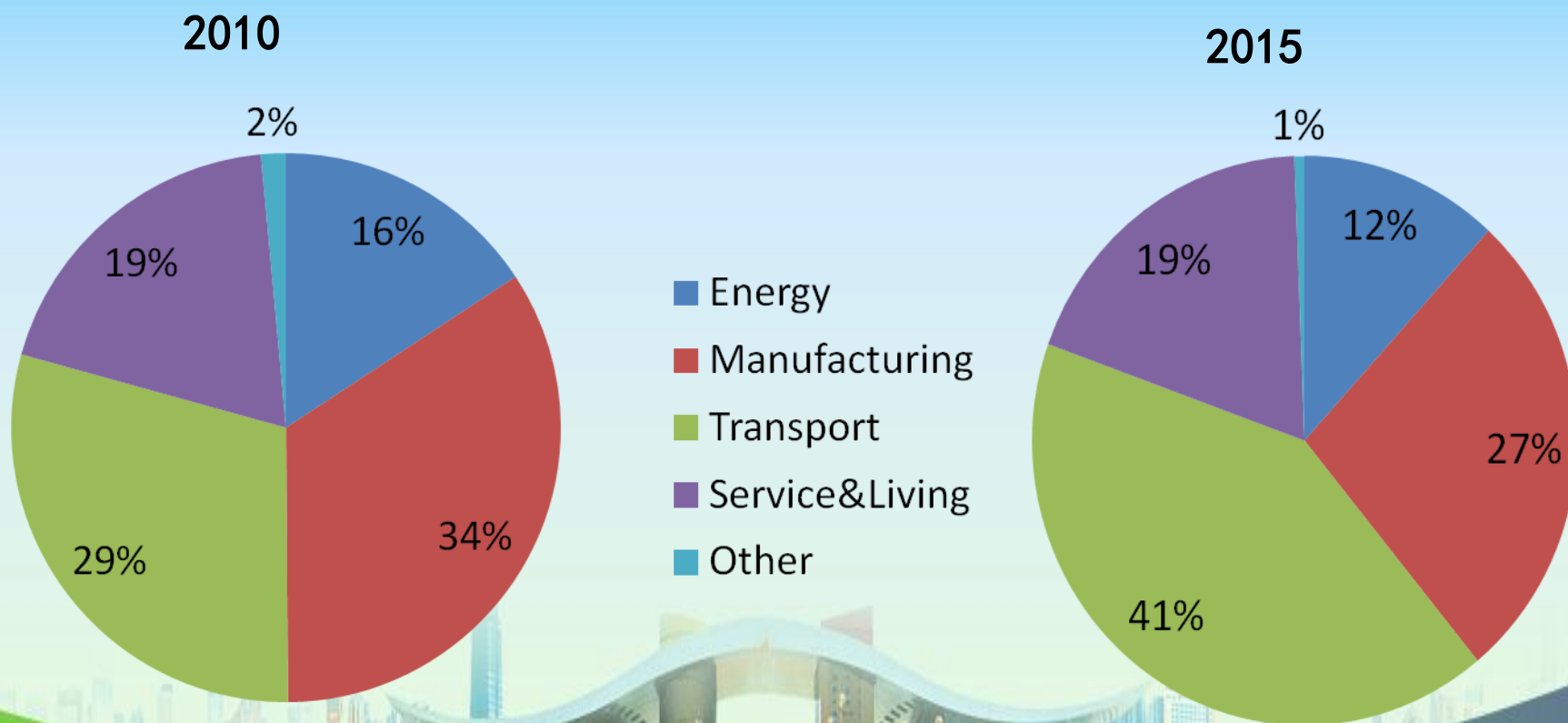


# 2010 the carbon emissions per capita is low



## Two high and one fast

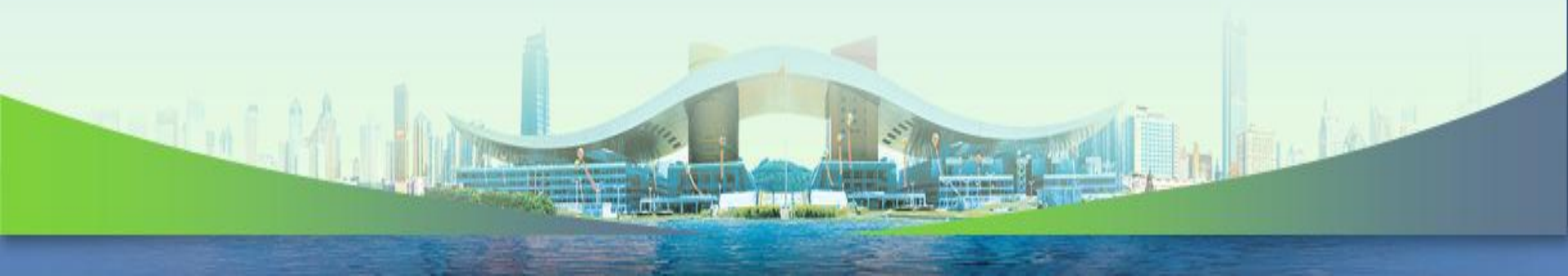
- the proportion of industrial carbon emissions is high
- the percentage of manufacturing industries is high
- the percentage of transportation sector heightening fast





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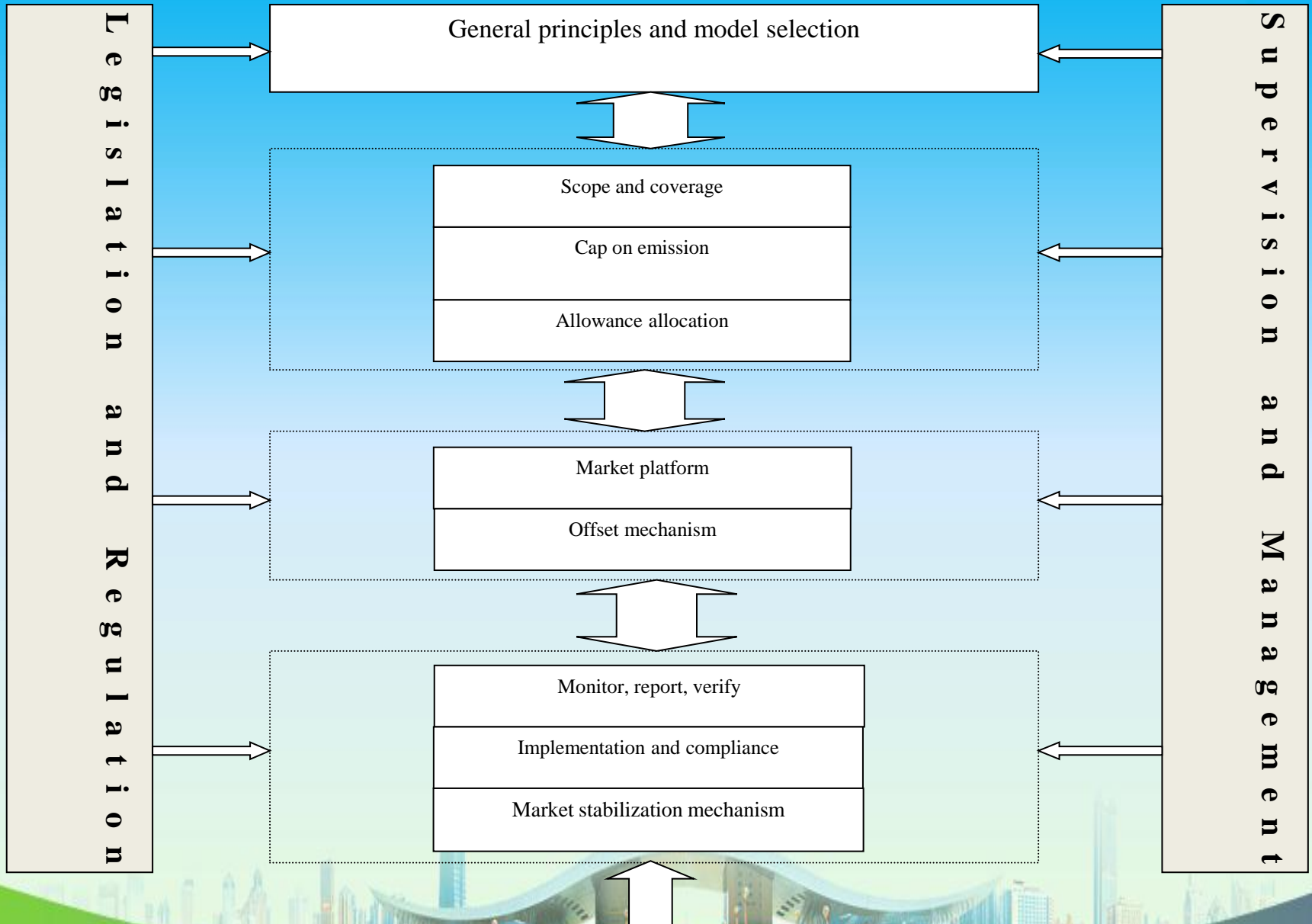
## 2 The Framework of Shenzhen ETS design

An urban “cap-and-trade” system characterized by intensity-based cap, output-based allocation and allowance trading.

Attaching great importance to coordinating the dynamic relations between economic growth, industrial transition and GHG emissions control.

Controlling carbon emissions by both improving energy efficiency and restraining energy demand.

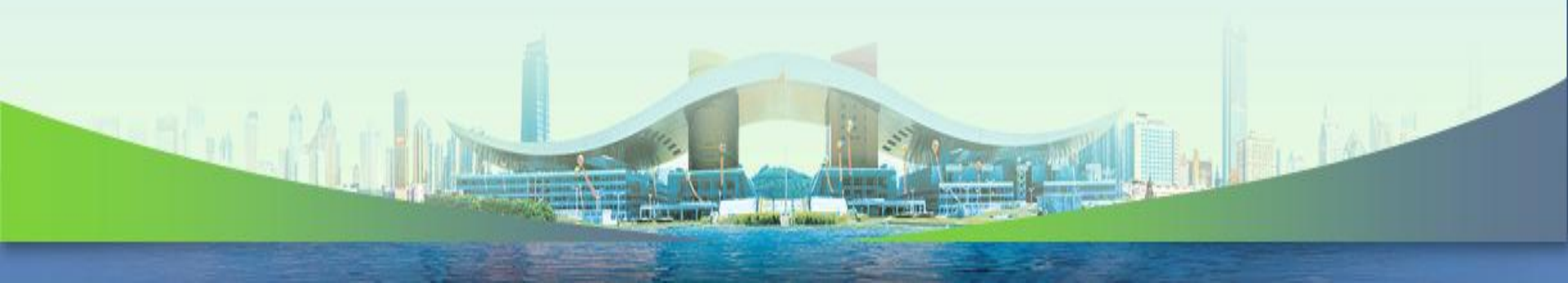




**Support systems for registry, trade and information management**

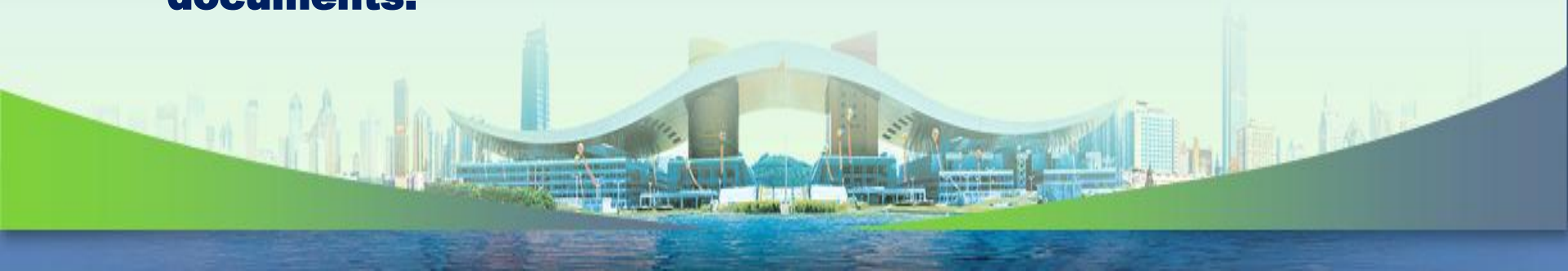
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# Legislation and Regulation

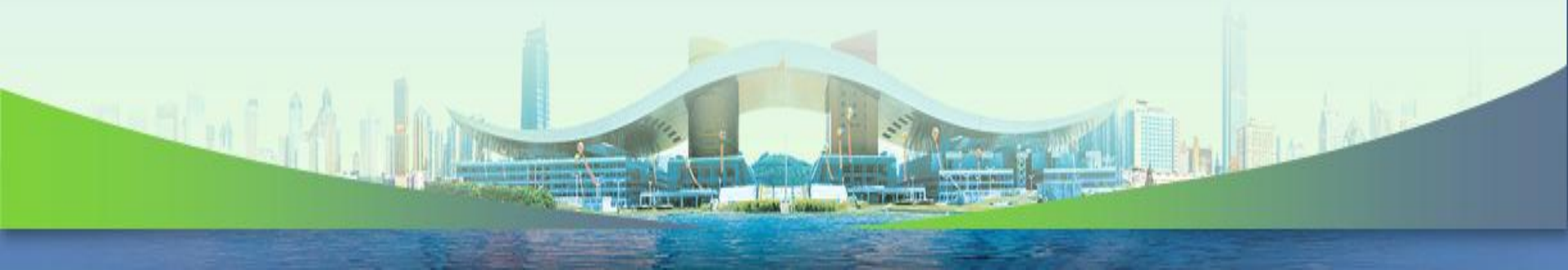
- ◆ **Provisions of Shenzhen Special Economic Zone on Carbon Emission Management** has been passed by the standing committees of Shenzhen on 30 OCT 2012.
  - The first ETS law in China up to now
  - Set up seven mechanisms: Cap Control, Allowance Management, Offset, Emission Trading, Emission Reporting, Supervision, Punishment
  - Enterprises who fail to compliance will be fined 3 times the carbon market price
- ◆ **Regulations of Shenzhen carbon emissions trading and other documents.**





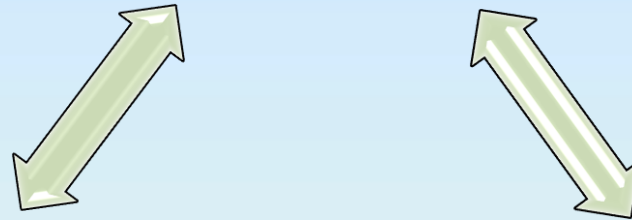
# Supervision and Management

- ◆ **Competent authority:** Shenzhen Development and Reform Commission
- ◆ **Other government department:** Market supervision and regulation department, Financial management department, Statistics department, Environmental protection department, etc
- ◆ **Social supervision system:** Social organizations, media, NGOs and the public.



# Support Systems

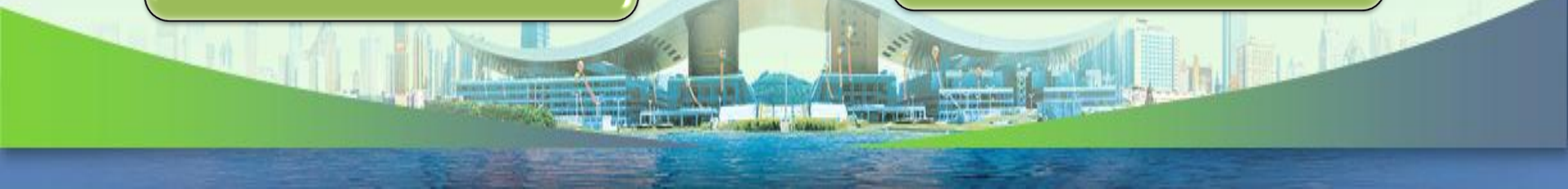
**Registry system**

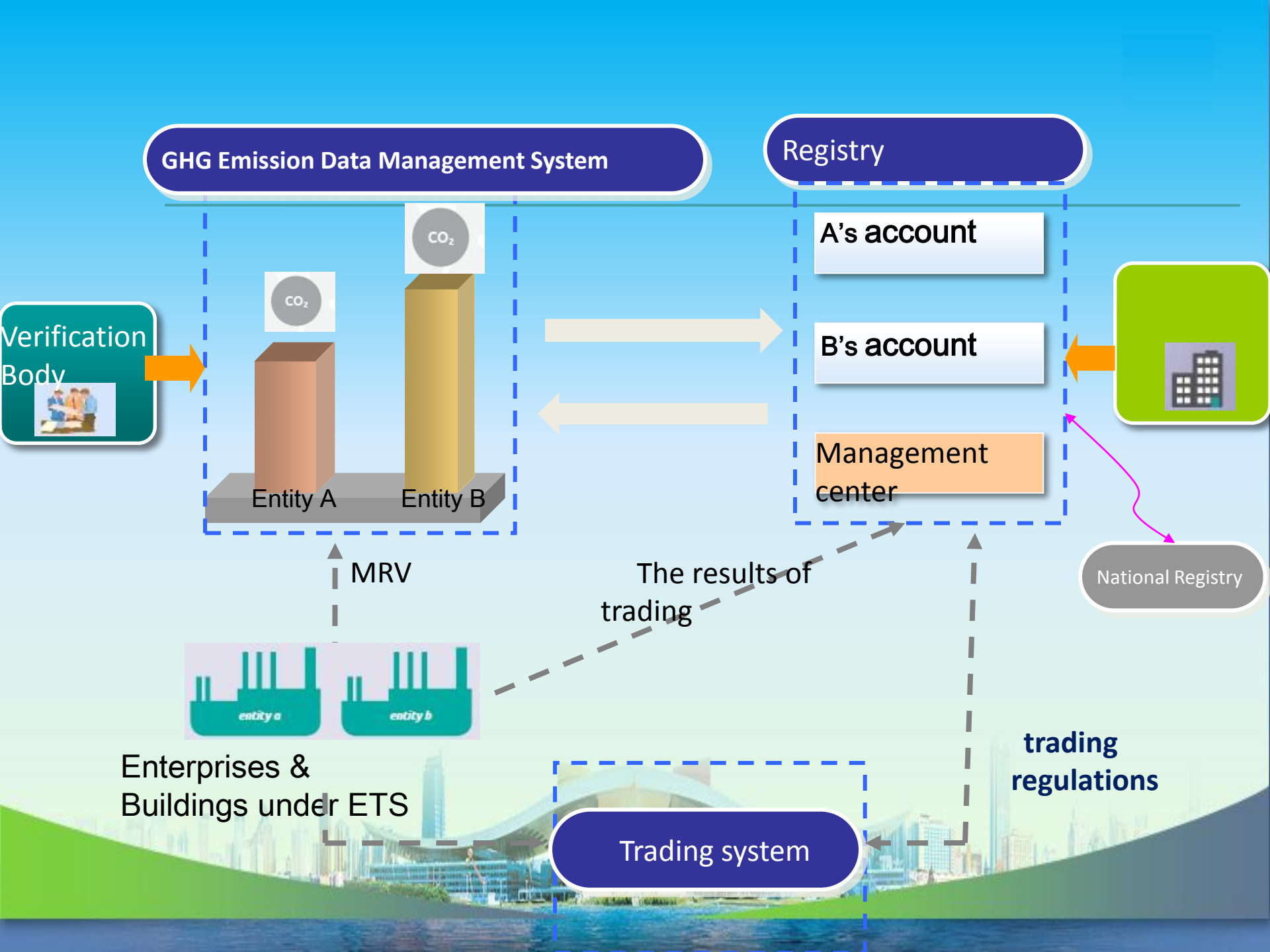


**Information  
management  
system**



**Trading system**





# Scope and Coverage

direct emissions from fossil energy consumption

direct emissions from industrial processes

direct emissions from products

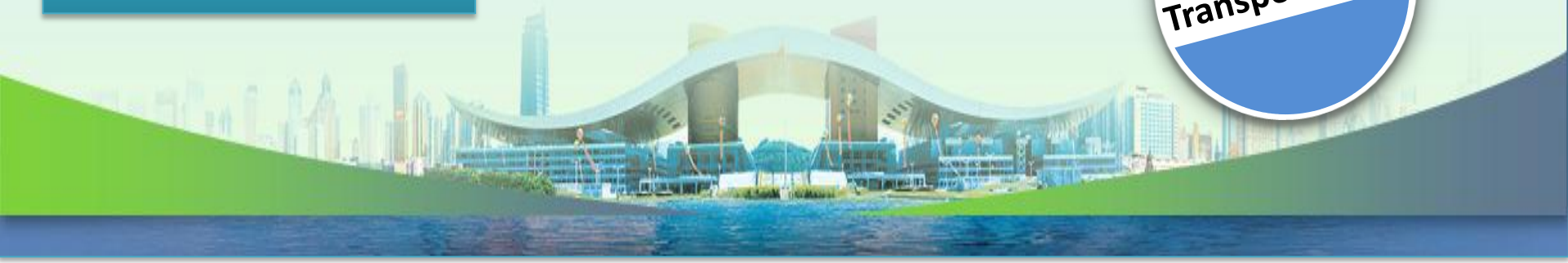
indirect energy emissions

**Carbon Trading Market**

**Industry**

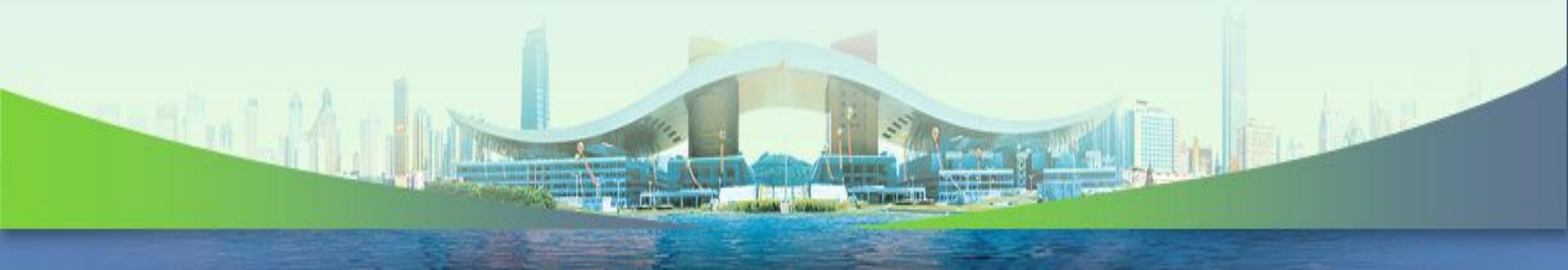
**Buildings**

**Transportation**



# Cap on emission

- ◆ **The emissions reduction target of Shenzhen (2010-2015 )**
- ◆ **Based on the reduction target of carbon intensity and actual output**
- ◆ **Carbon intensity is the amount of carbon emissions per unit of product, industrial added value or area.**





# Allowances allocation

## ◆ **Power industry and water supply industry**

- Baseline method, the carbon intensity of per unit product

## ◆ **Building sector**

- Shenzhen adopted the fixed energy consumption standard to allocate.

## ◆ **Manufacturing enterprises**

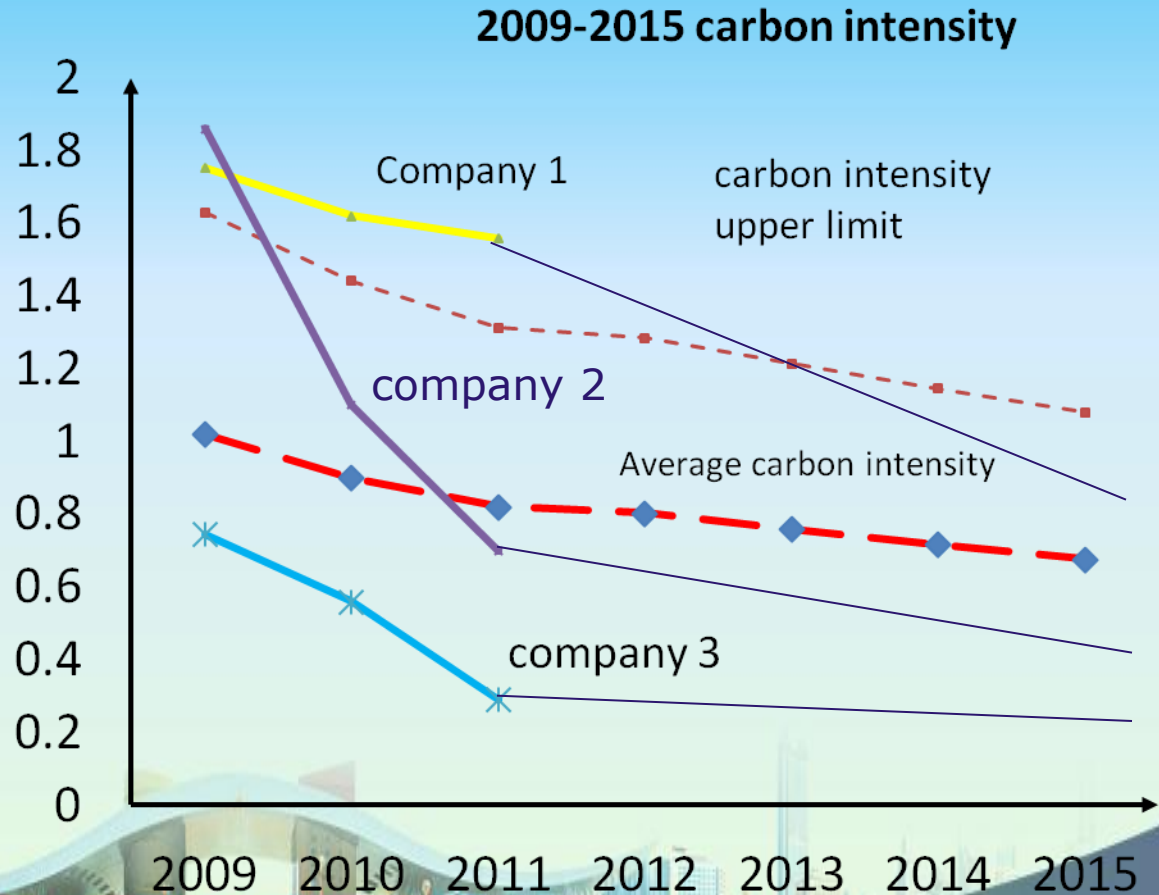
- “Game Theory Allocation Method”



# The allowances allocation for Manufacturing sector

## Methodology

- **defines the carbon intensity baseline of each sub-sector**
- **setting up the reduction target of each group**
- **the companies of the same group compete with each other to apply the allowances**



# Market platform and carbon offset mechanism

## Platform

- China Emissions Exchange

## Products

- Allowance and offset credits
- Spot

## Participants

- Regulated entity, brokers, institutional investors and individual investors, project owners, etc

## Carbon offset

- Proportional limit
- Project type



# MRV mechanism

## ◆ Issued two guidelines

- “Specification with guidance for quantification and reporting of the organization's greenhouse gas emissions”
- “Specification with guidance for verification of the organization's greenhouse gas emissions”

## ◆ Strengthens management of verification bodies

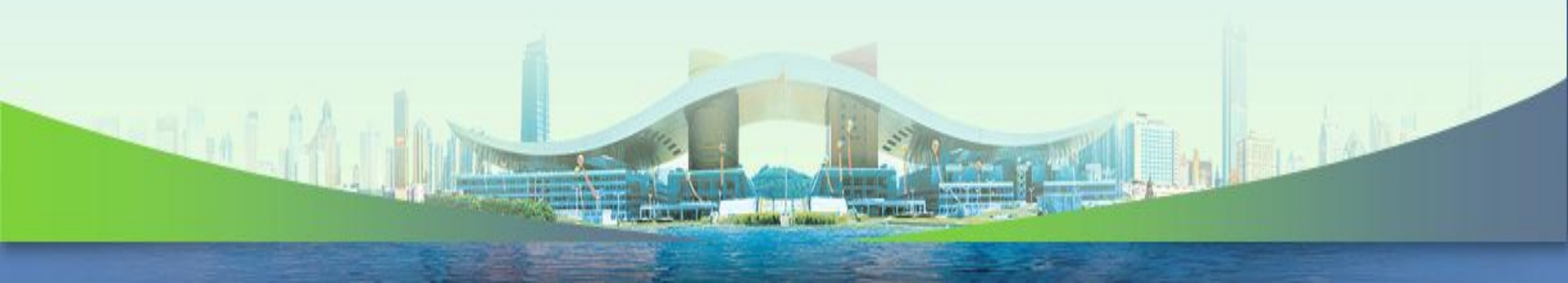
- checking their work by random check and special examinations,
- establishing a credit rating system of verification bodies
- forbidding a company appointing the same verification body or the same person for three years, etc.



# Implementation and Compliance

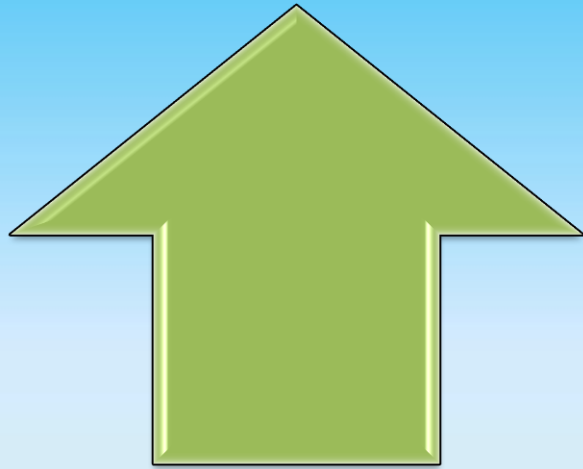
Enterprises who fail to compliance will:

- have to submit the allowance shortage in the following year.
- pay a dissuasive fine for each excess tonne of CO<sub>2</sub>-e ,3 times the carbon market price.





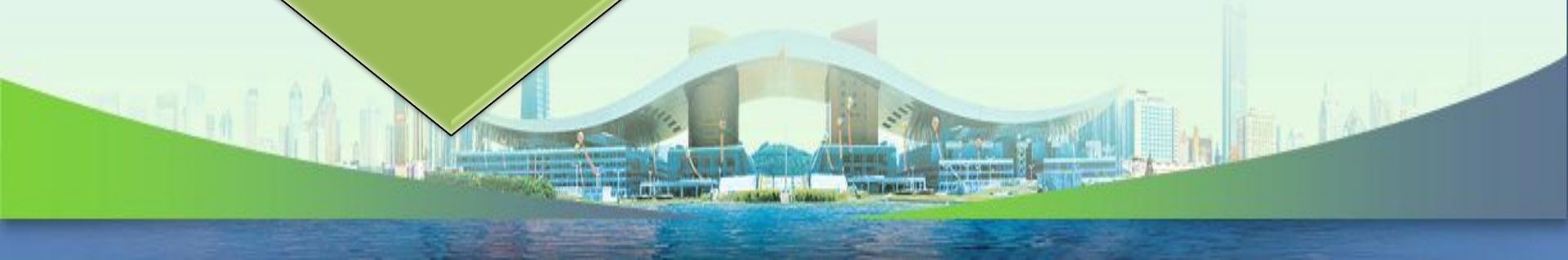
# **Market stabilization mechanism**



**Allowance Reserve  
mechanism**

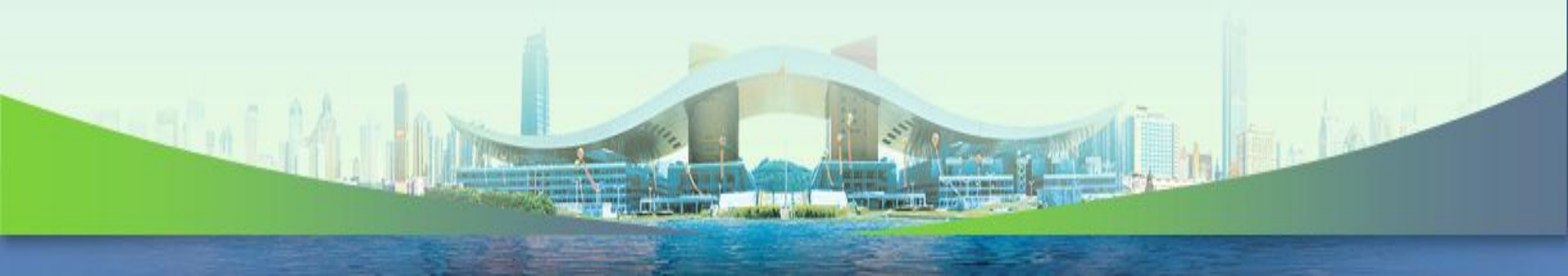


**Allowance recover  
mechanism**

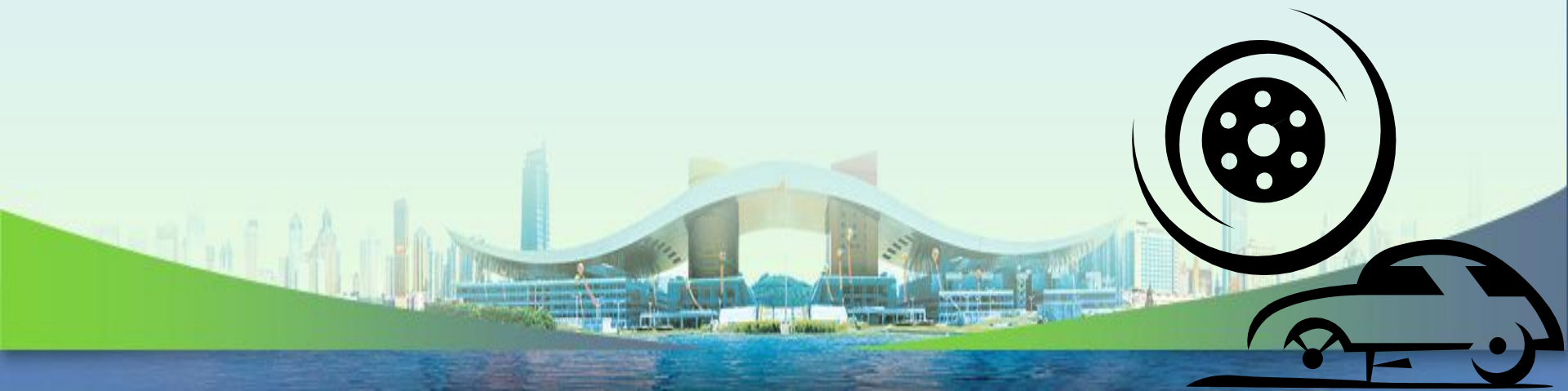


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- **How to activate the trading market and how businesses can better participate in Shenzhen ETS**
- **Exploring the transportation carbon market**
- **Move carbon market forward to financial market**
- **Collaboration on regional ETS**
- **Research on Evaluating the Design and Performance of Emission Trading Pilot Scheme in Shenzhen**



**Thank You !**

