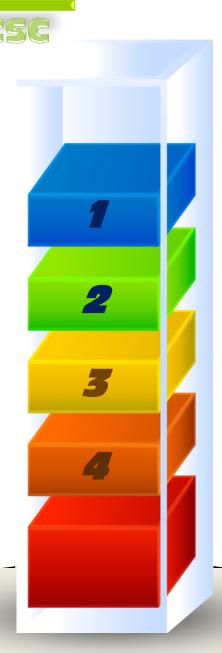


# GREENHOUS GAS INVENTORY IN CHINA

#### **ZHANG Xin**

National Center for Climate Change Strategy and International Cooperation 2017.9



- Important requirement and work on Climate Change in China
- National Greenhous Gas Inventory and methodology
- Regional and Enterprises
  Greenhous Gas Inventory and
  methodology
- Greenhous Gas Inventory and methodology for ETS



Primary target: Construction of greenhouse emission statistic and account system

- Government statistic system
- All-coverage statistic, recording book system
- National and regional greenhouse gas inventory
- Methodology: MRV guidance, Data bases, talent

**Main Work:** Establishing and improving greenhouse emission statistic and account system, Certification system of low-carbon production

2014

National Climate Changes program (2014-2020)

Primary target: Construction and Improving of greenhouse emission statistic and account system

- National, regional and enterprises level
- Reporting system, and professional institution

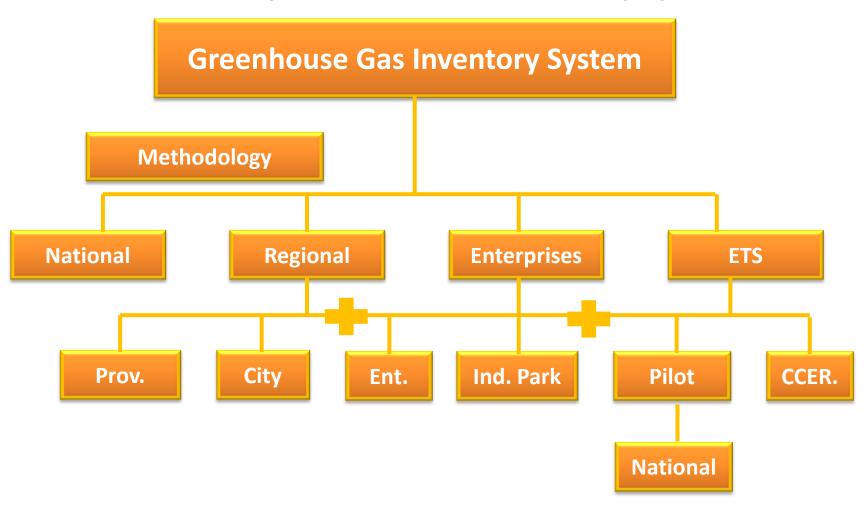
2016

13th Five-Year
Greenhouse gas
emission control
program

Important Requirement and Work for Climate
Change in China



#### Framework of Greenhouse Gas Inventory System



Important Requirement and Work for Climate
Change in China



#### China's Greenhouse Gas Emissions Data Information System

#### 温室气体排放数据直接报送与信息管理平台

国家/National 地方/Regional 企业/enterprise



National Greenhouse Gas Inventory Database System



**Emission and Intensity Assessment System** 

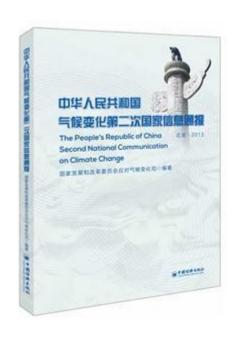


Enterprise GHGs Emissions Data Reporting System

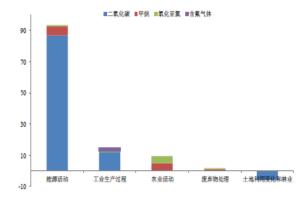
Reporting, Verification, Management and Analysis of Emission Information

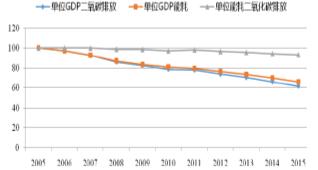


#### National Greenhous Gas Inventory and method



- ☐ *The First National Communication on Climate Change* (2004, 1994 GHGs Emission Inventory)
- ☐ *The Second national Communication on Climate Change* (2012, 2005 GHGs Emission Inventory)
- ☐ The First Two-years Updated Report on Climate Change (2017, 2012 GHGs Emission Inventory)
- ☐ The third national Communication on Climate Change
- **Updating GHGs Inventory (2012).** 我国2012年温室气体排放总量(不包括土地利用变化和林业)为118.96亿吨二氧化碳当量,其中能源活动温室气体排放93.37亿吨二氧化碳当量,能源活动二氧化碳排放86.88亿吨。
- Analysis on mitigation effect in 12th FYP period. 截至2015年,中国国家适当减缓行动取得积极进展:单位国内生产总值二氧化碳排放比2005年下降38.6%,比2010年下降21.7%;非化石能源占能源消费总量比重达到12.0%;森林面积比2005年增加3278万公顷,森林蓄积量比2005年增加26.8亿立方米左右。
- Introduction on construction of emission MRV system.
- Need and obtain of capital, technology on climate change.









## National Greenhous Gas Inventory and methodology 工作目标 Objective

1.健全国家、地方、企业三级温室气体排放核算工作体系,有效提升数据管理、分析和决策支持能力

To effectively enhance national, subnational and enterprise-level greenhouse gas emissions data management, analysis, decision-making capabilities

2.为国家及地方落实控制温室气体排放目标、开展温室气体排放管理、制定 应对气候变化相关政策提供可靠的基础数据

To inform and shape national and local climate and energy policy

3.改进我国排放数据质量,提高透明度,有效应对国际磋商与分析

To improve the transparency of China's emissions data, response to international consultation and analysis (ICA)



#### Greenhouse Gas Inventory and Methodology for Regions

- The low-carbon pilot region has completed the GHGs Emission Inventory.
- Most of provinces have completed the GHGs Emission Inventory, and devote to compile the inventory at regular.
- Some cities and countries try to compile the inventory in 13<sup>th</sup> FYP period.

| "十三五"时期<br>(201 <del>6</del> –2020) |         | "十四五"时期<br>(2021-2025) |         | "十五五"时期<br>(202 <del>6</del> –2030) |         |
|-------------------------------------|---------|------------------------|---------|-------------------------------------|---------|
| 北京                                  | 2020年左右 | 天津市                    | 2025    | 四川省                                 | 2030年   |
| 烟台市                                 | 2017    | 深圳                     | 2022年   | 海南省                                 | 2030年   |
| 宁波                                  | 2018年   | 武汉                     | 2022年左右 | 沈阳市                                 | 2027    |
| 温州                                  | 2019年   | 衢州市                    | 2022年左右 | 郴州市                                 | 2027    |
| 敦煌市                                 | 2019    | 赣州                     | 2023年   | 三亚市                                 | 2028    |
| 广州                                  | 2020年底前 | 晋城                     | 2023年   | 湘潭市                                 | 2028    |
| 南京市                                 | 2020    | 石家庄市                   | 2025    | 呼伦贝尔市                               | 2028年左右 |
| 杭州市                                 | 2020    | 长沙市                    | 2025    | 延安                                  | 2029年前  |
| 青岛                                  | 2020年   | 大连市                    | 2025    | 乌鲁木齐                                | 2030年   |
| 苏州                                  | 2020年   | 拉萨市                    | 2025    | 昆明市                                 | 2030    |
| 南平                                  | 2020年左右 | 吉林市                    | 2025年   | 遵义                                  | 2030年左右 |
| 镇江                                  | 2020年左右 | 贵阳                     | 2025年   | 吐鲁番市                                | 2030    |
| 济源市                                 | 2020    | 合肥市                    | 2024年左右 | 广元                                  | 2030年   |
| 金华市                                 | 2020年左右 | 银川市                    | 2025    | 池州                                  | 2030年   |

2010

13 low-carbon pilot region

2012

29 low-carbon pilot region

2017

45 low-carbon pilot region



#### Emission MRV System/Process of Key Enterprises

Provincial and municipal authorities report the roll of enterprises

National authorities determine the roll

Determine the direct reporting entities

Determine the third-party verification organizations

National authorities determine the roll of Thirdparty verification organizations accounting
methods and
complete
system method
preparations
according to the
latest national
standards

Determine industry accounting methods

Manage verification and e-check rules

parations ording to the st national ndards

Report and register monitoring plan

Direct reporting entities report and register monitoring plan Direct reporting entities report greenhouse gas data

National, provincial and municipal authorities review reporting progress

Data reporting

Direct
reporting
entities
covered by
carbon trading
system:
verified by the
third party

Data verification

Direct reporting entities not covered by carbon trading system: verified by provincial and municipal authorities National, provincial and municipal authorities analyze and summarize data based on authorization

Analysis and summary

Data publication

National authorities publish data and relevant reports according to data issuance system

Stakeholders inquire and download data



#### Emission MRV System of Pilot Carbon Market in China

| Pilot     | Technical Guidance and Methodology  | E-reporting<br>System |
|-----------|---|-----------------------|
| Beijing   | -Guidance to reporting and accounting of 6 sectors -Verification Regulation, recheck/ peer review | $\sqrt{}$             |
| Tianjin   | -Guidance to reporting and accounting of 5 sectors  | $\sqrt{}$             |
| Shanghai  | -Guidance to reporting and accounting of 9 sectors - Monitoring and Verification Regulation,      | $\sqrt{}$             |
| Guangdong | Guidance to reporting and accounting of 8 sectors   | $\sqrt{}$             |
| Shenzhen  | Guidance to reporting and accounting of manufactory and public building                           | $\sqrt{}$             |
| Hubei     | -Guidance to reporting and accounting of 11 sectors -Verification Regulation                      | $\sqrt{}$             |
| Chongqing | -Guidance to reporting and accounting of 6 sectors -Verification Regulation, recheck/ peer review | $\sqrt{}$             |



#### **Voluntary GHGs Emission Reduction Trading**





#### Emission MRV System of Pilot Carbon Market in China



- Accounting methodology of 24 industry sectors covering all the key emission enterprises covered by National ETS.
- Guidance declaimed by NDRC, 10 National Standard (GB)
- Monitoring Plan required.

#### Reporting

- Reporting guidance to 24 industry sectors covering all the key emission enterprises covered by National ETS.
- Guidance declaimed by NDRC, 10 National Standard (GB)

#### Verification

- Guidance to verification and the selection of verification institution (Reference) declaimed by NDRC
- Rechecking verification by NDRC and provincial DRC.



### 谢 谢!

**Thanks for Your Attention!**