

# China Statement on Methane Emission Reduction

Mr. Sun Zhen

Deputy Director-General

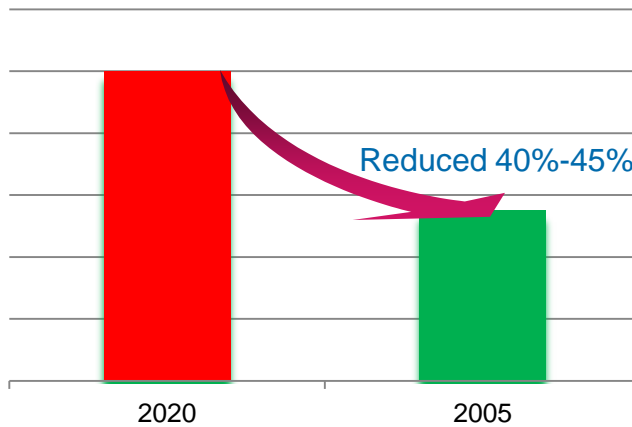
Department of Climate Change

National Development and Reform Commission(NDRC)

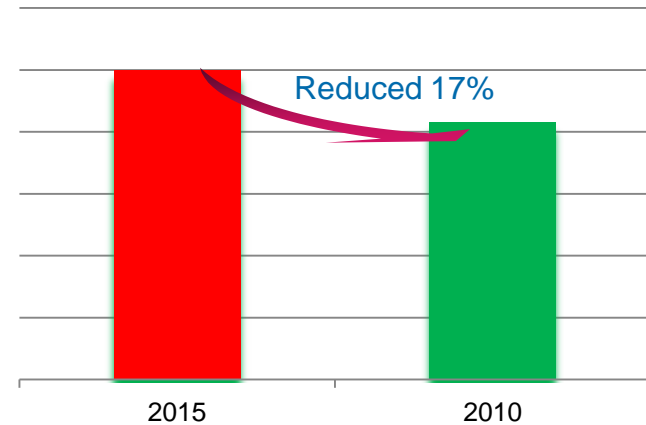
People's Republic of China



# Emission Reduction Target of China



The intensity of CO<sub>2</sub> emissions from 2005 to 2020



CO<sub>2</sub> emissions per unit of GDP from 2010 to 2015

- To ensure official GHG emission reduction target, the *National Plan for Addressing Climate Change (2011-2020)* was issued by the Government.
- Compared with 2005, the intensity of carbon emissions has dropped by 28.5% in 2013, equivalent to CO<sub>2</sub> emission reduction of 2.5 billion tones.



# Measures of *Greenhouse Gas Emissions Reduction*

- NDRC issues the *Temporary Approaches for Voluntary Greenhouse Gas Emissions Reduction Trading Management* in June, 2012.
- Shanghai and Tianjin city published the local carbon emission reduction management methods in 2013, Beijing and Guangzhou city published the local carbon emission reduction management methods in 2014.
- By the end of September 28, 2014, 47 carbon emission reduction projects are registered for approval by NDRC.
- 7 provinces and cities has initiated pilot programs for carbon emissions trading, determined the total volume of carbon emission targets, and established distribution mechanism. Currently the trading volume reached 11 million tones of CO<sub>2</sub>, with the turnover of 500 million RMB. The price remains generally steady and shows a trend of rising.



# Measures of *Greenhouse Gas Emissions Reduction*

---

- Based on the *IPCC Guidelines for National Greenhouse Gas Inventories*, China government had built three tier GHG calculation system. The corresponding GHG calculation methods and guidance at different levels were also built.
  - ✓ Guidelines for National Greenhouse Gas Inventories
  - ✓ Guidance for Compiling Provincial Greenhouse Gas Emission Lists
  - ✓ Guidance for Greenhouse Gas Emission Calculation in Key Industries

The detail information can be found in the Figure 1



# Measures of Greenhouse Gas Emissions Reduction

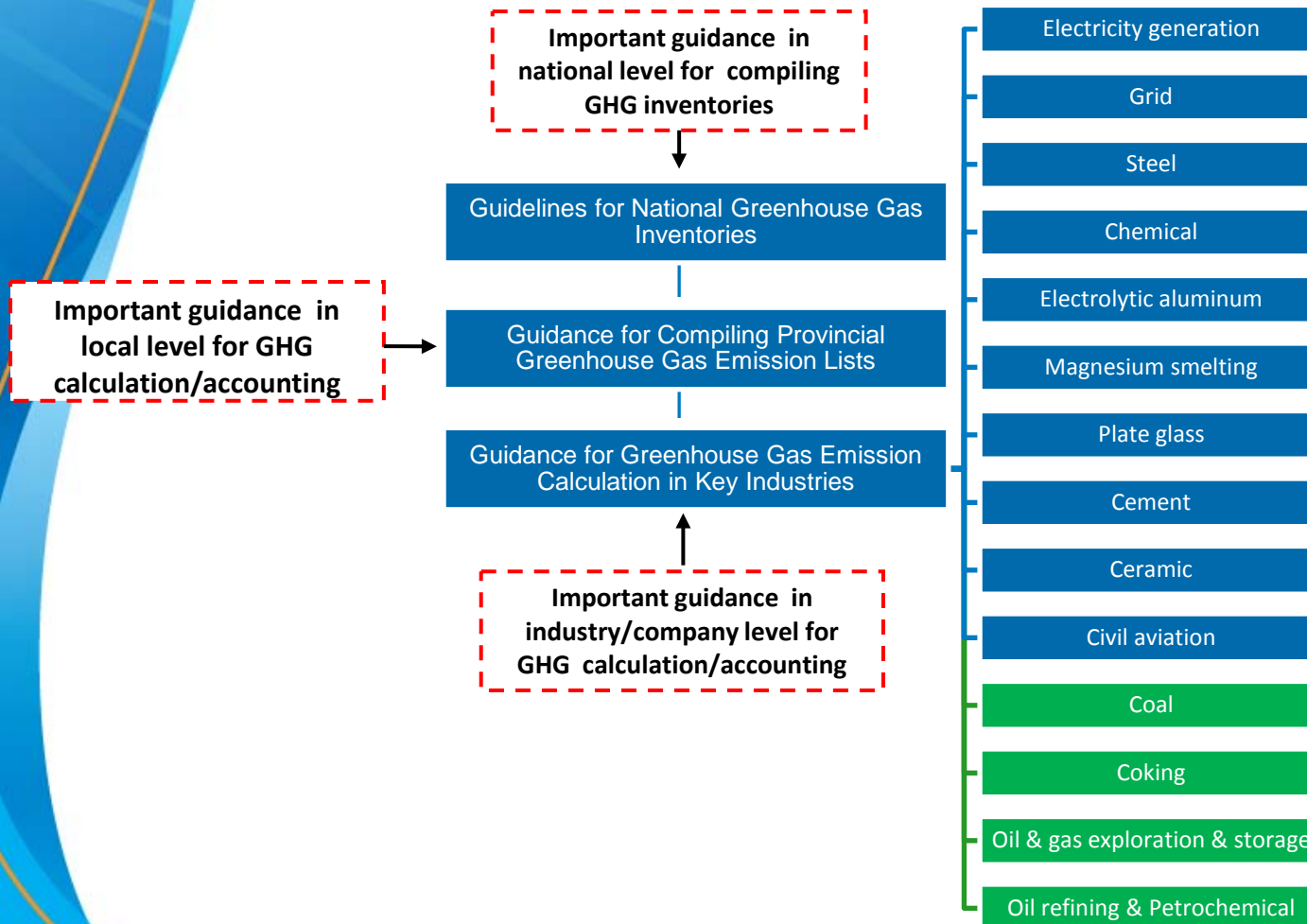
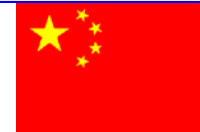
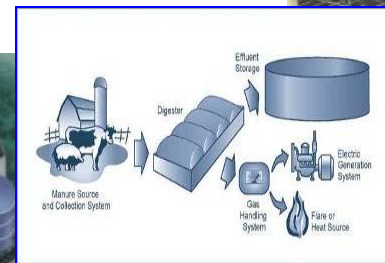


Fig.1 Guidance System of GHG Emission Calculation in China

# Latest Progresses of Five Sectors

- Chinese government attaches great importance to methane recovery and utilization and has successfully carried out a great many projects in the following five sectors, which has increased effectively reduce GHG emission and improved coal mine safety and the quality of air and water across China.

- Coal **China Coal Information Institute**
- Agriculture **Ministry of Agriculture**
- Municipal solid waste **Ministry of Construction**
- Waste water **Ministry of Construction**
- Oil and gas **CNPC, SINOPAC, CNOOC**



# Coal Mines

---

- CMM Projects Sponsored by GMI
  - From 2006 to 2013, GMI has approved 11 funding projects, amounting for \$2.2 million total, which effectively promoted the drainage and utilization of CBM and CMM, as well as energy conservation and emission reduction in China.

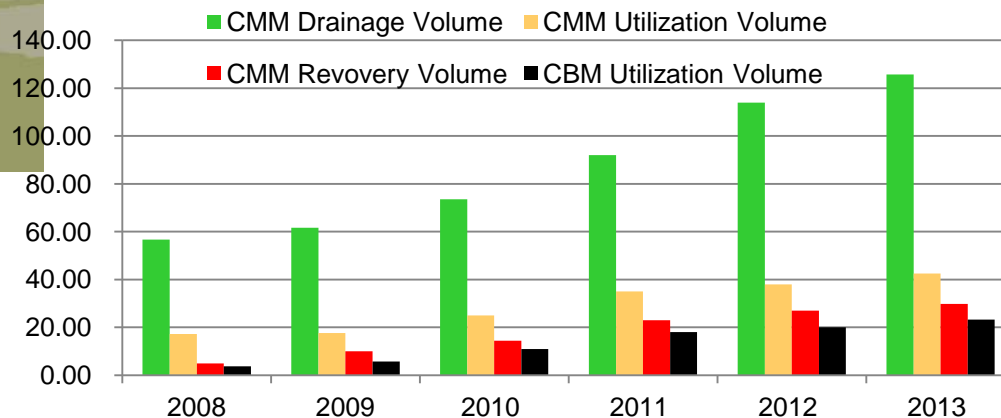




# Coal Mines

- CBM/CMM Drainage and Utilization Volume

- In 2013, CMM drainage volume reached 12.6 billion m<sup>3</sup>, with an increased of 1.2 billion m<sup>3</sup>, up by 10.2%.
- The CMM utilization volume was 4.3 billion m<sup>3</sup> in total, with a year-on-year increase of 504.7 million m<sup>3</sup>, up by 13.5%. The utilization rate was 33.8%, up by 1%.
- The CBM production was 2.98 billion m<sup>3</sup>.
- The CBM utilization volume was 2.3 billion m<sup>3</sup>, with year-on-year increase of 322 million m<sup>3</sup> and 317.4 million m<sup>3</sup> respectively, up by 12.1% and 15.8%.





# Coal Mines

---

- **Regulatory Update**
- Guideline on Further Accelerating the CBM/CMM Exploitation and Utilization issued by General Office of the State Council in China in Sep. 22, 2013.
  - Increase National Government Finance Support
  - Strengthen Taxes and Duties Incentives
  - Perfect the Policy on CBM Price and Electricity Price
  - Strengthen Management on CBM Development and Utilization
  - Promote S & T Innovation



# Coal Mines

- **Capability Building**
- With the support of GMI framework, the China Coal Information Institute had held the 13 International Symposiums on CBM/CMM Development and Utilization which provide long-term and stable platform for the communication and cooperation among the GMI member countries in the methane emission reduction in the coal field.
- The 14<sup>th</sup> International Symposium will be held in Beijing on December 16 to 17 in 2014, .



# Agriculture

- In 2013, China cooperated with GMI to prepare feasibility study reports for 16 livestock farms , which provided a technical support for the application for World Bank Loan Project.
- From 2003 to 2013, Chinese government accumulatively allocated 33.9 billion RMB for the construction of rural biogas projects, and vigorously developed the rural household biogas and farm biogas project



# Agriculture

---

- By the end of 2013, the biogas household users across China had amounted to more than 43.3million households, including 41.5 million rural households, 1.8 million central gas supply households, 599.6 million large and medium-sized biogas (industrial waste water) facilities with the annual household biogas output of 13.7 billion m<sup>3</sup>, and large and medium-sized biogas production of 2.1 billion m<sup>3</sup>.



# Municipal Solid Waste

- From 2005 to 2012, there were 73 CDM landfill gas projects, with the accumulated emission reduction of 9.2 million tCO<sub>2</sub>e in total.



# Municipal Solid Waste

---

- With the acceleration of China's urbanization process, the urban life garbage output also increases rapidly. By the end of 2013, there were 410 domestic waste landfills with capacity of the landfill gas utilization, accounting for 26.5% of all the operation landfills, mainly lie the large cities in the eastern region of China.
- By the end of 2012, 51 landfill gas collection and treatment projects have been constructed and put into operation, including 49 landfill gas power plants with the installed capacity of 103MW.





# Oil and Natural Gas System

---

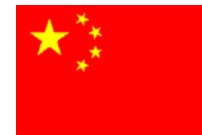
- The emission reduction projects in the oil and gas system mainly include oilfield associated gas recycling, and leakage detection of storage and transport of CNPC, SINOPEC and CNOOC.
- CNPC has compiled the *Guidance for Oilfield Enterprises Greenhouse Gas Control* supported by GMI, and collaborated with GMI project network members on evaluation software training projects.
- In 2012, SINOPEC and Canada company have collaborated on methane recovery monitoring project within GMI framework.



# Wastewater

---

- The NDRC and the Ministry of Housing and Urban Construction selected 7 harmless, resource sludge treatment demonstration projects, which includes 2 anaerobic digestion for methane utilization projects in Dalian, Beijing.
- In 2012, it was put forward in the *Twelfth Five-year Plan for National Urban Sewage Treatment and Recycling Facilities Construction* issued by NDRC that, by the end of 2015, the municipal sludge harmless disposal rate will reach 70% and the sludge harmless disposal rate of the counties and key towns will reach 30%, and biogas generation by anaerobic digestion of sludge is encouraged.



---

# Thank you

