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# **Current Status and Prospect of CCS in China**

**June 2010**

# Content

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**1.Current status of CCS development in  
China**

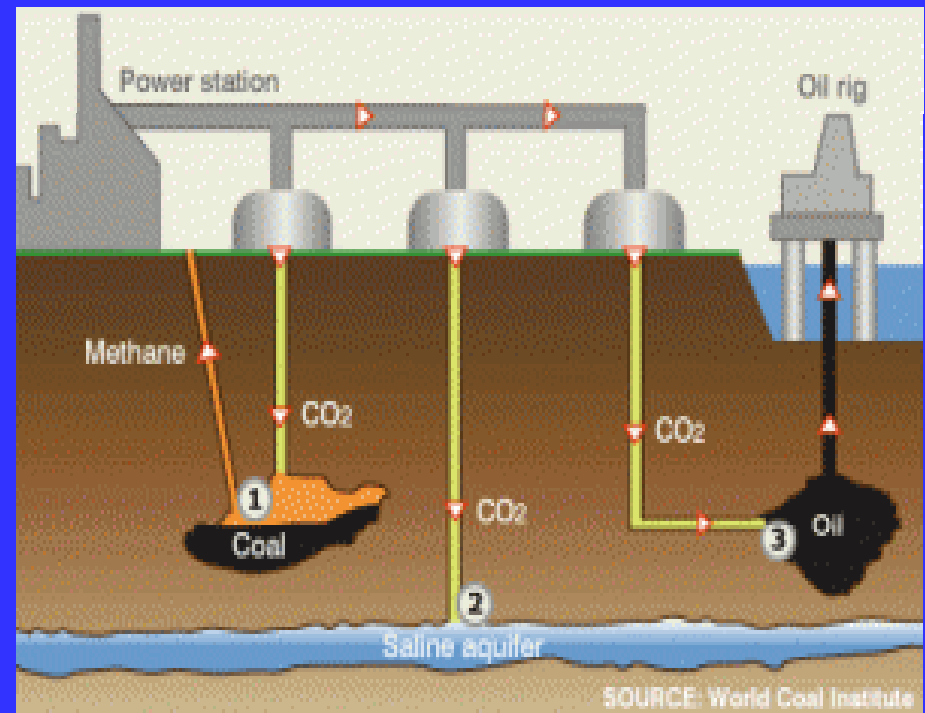
**2.Sinopec CCS projects**

**3.Prospect of CCS development in China**

# 1. Current status of CCS development in China

## 1) CCS in China

- ◆ CO<sub>2</sub> EOR programs since the 1960s.
- ◆ CO<sub>2</sub>-ECBM Project in the Qinshui area at the beginning of the 21 century.



# 1. Current status of CCS development in China

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## 1) CCS in China

- ◆ **Research & development of CCS technologies**

  - The Plan 973** (the State Plan for Development of Basic Research in Key Areas)

  - The Plan 863** ( the State Plan for High-Tech Research and Development )

- ◆ **Carbon capture technologies rank the international leading level to a certain degree**

Experiences have been gathered during the implementation of carbon capture technology, but how to store carbon is still a check point.

- ◆ **The first power plant with CCS equipment was put into operation in 2008**

# 1. Current status of CCS development in China

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## 1) CCS in China

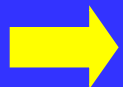
◆ **A preliminary study on selection of suitable regions for CO<sub>2</sub> storage**

◆ **CO<sub>2</sub> storage potential: 1.45 trillion**

46 depleted oil or gas fields: 7.2 billion t

68 non-commercial underground coal beds : 12 billion t;

24 saline beds: 1.435 trillion t



**A long way to go.**

# **1.Current status of CCS development in China**

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## **2) Efforts made by Chinese government in dealing with climate changes**

- **An agency was set up in 1990 to handle climate change affairs**
- **In 2003, China participated the leaders summit for carbon storage, signed the Charter and become one of the sponsor nations of the CSLF.**
- **In 2005, CCS is put in to the state plans for middle- and long-term scientific development for the year of 2020**
- **In 2006, the NDRC and the National Science & Technology Board jointly issued: Measures for the Operation and Management of Clean Development Mechanism Projects**

# 1. Current status of CCS development in China

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## 2) Efforts made by Chinese government in dealing with climate changes

- **In 2007, the National Climate Change Office was upgraded to the National Climate Change Group with the Prim Minister Wen Jiabao as the leader. The CDM Commission comprising seven members was also set up in the same time.**
- **In 2007, the State Council compiled and issued the China National Plan for Coping with Climate Change, and later it initiated the Special Sci-Tech Campaign to Cope with Climate Changes.**
- **16 CCS projects**

# 1. Current status of CCS development in China

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## 3) International cooperation in dealing with climate change

- Cooperating with EU, India, Brazil, South Africa, Japan, U.S.A, Canada, England, Australia, and etc.
- Helping other developing countries.





## 2.Sinopec CCS projects

**The Songnan gas field (currently under construction)**

**CO2 content : 20%**

**CO2 generated each year: 450 to 500 k t**

**CO2 will be disposed through:**

### **1) CO2-flooding to improve recovery**

**Daily gas injection: 1 440-1 500 t**

**Annual injection volume: 480 k t**

**Within 15 years: oil production increase 800 000 t, EOR is increased by 8-10%**

### **2) CO2 re-injection**

**Replenish the gas formation energy: an estimated 20% of formation pressure can be resumed.**

**The maximum annual re-injection capacity:20 k t**

**Through flooding and re-injection, the Songnan gas field will be able to handle 500 k t of CO2, achieving a zero CO2 emission**

### 3. Prospect of CCS development in China

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#### 1) Chinese government pays much attention to the issue of climate change

\*Stick to the principle of “common but differentiated responsibility”,

\*Take part in the international campaigns against climate change,

\*Fulfill its duties formulated in the United Nations Framework

Convention on Climate Change and the Kyoto Protocol.

---In 2009, Chinese government announced that China would reduce its carbon dioxide emission by 40-50 % per GDP from 2005 level by 2020 .

# 3. Prospect of CCS development in China

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**\*Highlights the positive role of CDM (Clean Development Mechanism)**

**\*Willing to contribute to the reduction of green house gas emission through participating CDM projects.**

**-----By July, 2008, China had registered 244 CDM cooperation projects in the Unite Nations, and through these projects an estimated 113 billion tons of CO<sub>2</sub> emission will be reduced annually.**

# 3. Prospect of CCS development in China

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## 2) China values highly the research and development of CCS technologies

- Incorporated it into the nation's 12th Five-Year Science and Technology Plan
- A study on the feasibility of building up a CCS center
- The nation put emphasis on international cooperation and has been actively exploring foreign financing channels and increasing the introduction of advanced technologies.

## 3. Prospect of CCS development in China

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### 3) Brilliant future for the implementation of CCS technologies in China

Emphasizing CCS is one of the most important strategic choice for Chinese government on dealing with climate change. And China will be a market with most potential for CCS.



**Bon voyage in  
Phuket!**

**Welcome to the  
World Fair in  
Shanghai!**

