China Coal Sector Update to the 21st Session of the Global Methane Initiative (GMI) Coal Subcommittee

3 June 2015
Bogotá, Colombia
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China Coal Sector Update

- **Coal production and consumption in China**
  - Coal production was 3.87 billion tons in 2014, decreased 2.9% compared with that in 2013.
  - Coal consumption: 4.13 billion tons in 2014, decreased 2.5% compared with that in 2013.

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<th>Year</th>
<th>Coal Output</th>
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CMM drainage

- CMM drainage volume increased from 2.2 Bm³ in 2005 to 13.3 Bm³ in 2014, increased by more than 5 times compared with that in 2005.
CBM Recovery from surface wells

- CBM Production Volume is 3.73 billion m³ in 2014.
- Jincheng Anthracite Mining Group (JAMC) is the largest CBM producing company in China, produced 1.43 Bm³ in 2014, accounting for 38.3% total in China.

![CBM Production Volume from 2005 to 2014 in China](chart.png)
CMM underground drainage

- The top 10 provinces with CMM drainage are Shanxi, Guizhou, Anhui, Henan and others in 2014, see following figure.
- Drainage volume of CMM in Shanxi Province was 5.53 Bm³ in 2014, accounting for 41.7% of total CMM in China.

Top 10 Provinces with drainage volume of CMM in first half year of 2014
Utilization of CMM

- The volume of CMM utilization was 4.53 Bm$^3$ in 2014 with the utilization rate of 34.2%.

CMM utilization from 2000 to 2014 (10$^8$ m$^3$)
Key Areas of CMM Utilization

- Utilization volume of CMM was 2.06 Bm³ in Shanxi Province in 2014, accounting for 45.4% of total utilization volume in China.
- The recovered CMM was mainly used as fuels for power plants, households, industries, etc.

Top 10 Provinces with utilization volume of CMM in the 2014
China Coal Sector Update

- Regulatory Updates
  - Guideline on Further Accelerating the CBM/CMM Exploitation and Utilization issued by the State Council of P.R. China in Sep. 22, 2013.
    - Increase Government Funds Support
    - Increase Indirect Financial Incentives
    - Encourage Private Investment in CBM/CMM
    - Market Pricing Mechanism
    - Encourage Power plants to use CBM/CMM as fuel
  - Regulations and Actions for Coal Mine Safety
    - Revising coal mine safety regulations, calling for comments.
    - Recovery CBM from virgin coal seams before construction of a mine
China Coal Sector Update

- CBM Exploitation and Development Action and Plan 2020 had been published on February 3, 2015
  - Building 3-4 bases of CBM development,
  - Proven CBM reserves reaches 1 trillion Bm³.
  - The CBM(CMM) production Volume will reach 40 Bm³ per year, CBM production volume is 20 Bm³, and should be used 100%. CMM drainage volume is 20 Bm³, utilization rate of CMM is more than 60%.
  - Integrating CBM recovery and coal mining in the key coal mining areas
CMM Project Outlook

- **Emission reduction projects in China:**
  - 89 CDM projects have been approved, therein, 58 projects were registered and 33 projects with CERs issuance in use of CMM up to May 22, 2015.
  - GMI provides the total grants of USD$ 2.17 million for 11 CMM projects in China from 2006 to 2015.
CMM Project Outlook

- **Policy barriers**
  - Coal companies suffered from economic losses as coal price reduced since 201, hence reduced financial support for CMM projects
  - CMM projects could not produce profits without CDM funds

- **Approaches to overcoming challenges**
  - NDRC is reviewing the suggestions on increased subsidies for CMM recovery and utilization.
  - By the end of April 8, 2015, 24 projects of CMM utilization projects had been approved as voluntary emission reduction projects in NDRC, 3 had been registered.
CMM Project Outlook

- Anticipated or planned projects
  - Low Quality CMM Utilization (Concentration < 30%): Enrichment and purification with PSA for civil use or power
  - Comprehensive Utilization Project of Low Quality CMM and VAM
  - CCII submitted application for the R&D project – Synthesis and its reaction kinetic model research of novel Pd-based monolithic catalysts for ventilation air methane to be funded by the National Science Foundation in 2013.
CMM Project Outlook

Anticipated or planned projects

- Recovery and Utilization of Abandoned Coal Mines
  - Supported by Prosperity Fund of UK, Policy Framework for AMM Recovery and Utilization in China had been accomplished, which effectively promote the AMM development in China
  - Feasibility study of AMM recovery and utilization pilot project and policy recommendation for AMM recovery and utilization in China had been approved by the UK Embassy this year.
Welcome you to attend

15th International Symposium on CBM/CMM and Shale Gas in China

Landmark Hotel, Beijing, P.R. China

November 12-13, 2015

Supporters: EPA, USA
State Administration of Coal Mine Safety, China
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