United States Coal Sector Update to the 18th Session of the Global Methane Initiative (GMI) Coal Subcommittee

19-20 November 2013
U.S. Environmental Protection Agency

United States Coal Sector Update

- Coal sector trends
  - Coal production increased from 984 MMt in 2010 to 993 MMt in 2011, decreased to 922 MMt in 2012
  - CMM emissions decreased from 78 MMtCO2e in 2010 to 68 MMtCO2e in 2011 (including abandoned and surface mines)
  - Greenhouse Gas Reporting Rule Data
    - 2012: 151 active underground mines, 28 million metric tons CO2e
    - 2011: 159 active underground mines, 30 million metric tons CO2e
- New trends in the energy sector
  - Increase in natural gas consumption, price is starting to rebound slowly
  - Coal consumption relatively steady with modest price decreases
- Regulatory Update
  - N/A
- Implementation of national plans/directives
  - N/A
- New project: Elk Creek CMM Power Generation Project, Colorado

CMM Project Outlook

- Challenges to emission reduction projects in United States:
  - Ownership, leasing authorities on federal lands remain unclear
  - A lack of infrastructure (e.g., pipelines) in certain regions of the country (i.e. particularly in the west) to move CMM from mines to natural gas markets.
  - Low power prices (electricity) in some parts of the country (e.g., the west) that make CMM power generation projects unattractive from an economic perspective.
  - A weak domestic voluntary offsets market due to extremely low carbon prices.

CMM Project Outlook (2)

- Approaches to overcoming challenges
  - Voluntary GHG registries and carbon markets
  - State alternative energy and renewable energy programs
  - State capital investment, loans, and tax benefits and credits
  - US EPA GHG Reporting Rule
  - Support for technology demonstration projects
  - Development of technical documents, tools and resources
- Update
  - New project opportunities presented by potential California Air Resources Board inclusion of CMM as compliance offset (Mine Methane Capture protocol)

United States Coal Sector Methane Action Plan

- Updated, available online at https://www.globalmethane.org/coal-mines/index.aspx
- Priorities:
  - Reduce GHG emissions
  - Promote use of clean energy source
  - Achieve profitable recovery of CMM
- Activities to Promote Methane Mitigation and Abatement
  - Between 1994 and 2010, U.S. CMM emissions reductions have effectively removed the equivalent of more than 357 million metric tons of carbon dioxide from the atmosphere
  - U.S. identifies, evaluates and promotes CMM recovery and use opportunities; provides support for technology demonstration projects; and develops technical documents, tools and resources
  - International activities under the auspices of GMI
    - CMM/CBM Clearinghouses; pre-feasibility and feasibility studies
    - UNECE Best Practice Guidance for Effective Methane Drainage and Use in Coal Mines, technical seminars
    - Technical resources / tools
    - Policy white papers

Contact Information and Announcements

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- Announcements: US CMM Conference 2014