

Subcommittee Report

Subcommittee Co-Chairs
23 July 2020



CMM Project Development Online Course

- Introduces principles for assessing feasibility of developing projects to capture and/or use coal mine methane (CMM).
- Seeks to help develop CMM mitigation projects, for which prefeasibility study is a necessary step.
- 2 modules are already available.
- 6 more modules are under development and expected to be released in 2020.

The screenshot displays the Global Methane Initiative online course interface. The top section shows 'Module 1' with the title 'Are You Ready to Initiate a Pre-feasibility Study?'. Below the title, there are three main steps: 'Clarify study objectives & scope', 'Confirm commitment of mine management', and 'Verify project type'. The bottom section shows 'Module 2: Mine Background Information and Evaluation' with the title 'Steps in a Pre-feasibility Study'. The steps are listed in a numbered list:

- 1 Assess regional and national coal industry and methane emissions
Understand the project's economic viability
- 2 Identify regulatory barriers
Consider the project's potential regulatory viability
- 3 Request, obtain and validate data from mine
Obtain data to determine the scope of work
- 4 Assess gas resources
Determine the project viability
- 5 Review existing gas drainage practices
Review current practices to develop alternatives
- 6 Evaluate potential CMM markets
Determine possible end uses of the gas captured
- 7 Identify and assess project risks
Determine if alternatives must be considered due to risk
- 8 Identify best end use option
Maximize the revenue of the project
- 9 Define assumptions and perform financial economic analysis
Determine realistic expectations for the project
- 10 Review results, adjust assumptions, and develop a recommendation
Make adjustments to recommendations based on all available data

At the bottom of the screenshot, there is a navigation bar with a search box, a 'How to Navigate' section, and a set of numbered buttons (1-7) for navigating between modules. A note at the bottom states: 'These components will be covered in more detail in subsequent modules. Hover to preview'.

Available on the GMI website at: <https://globalmethane.org/training/CoalMineTraining.html>

19th International CBM/CMM Symposium - China



- Organized in December 2019 by the China Coal Information Institute and attended by more than 150 participants.
- Provided an excellent forum for exchange of CMM development lessons learned and best practices in CMM capture and use.
- U.S. Environmental Protection Agency (USEPA) presented on global perspectives and best practices for abandoned mine methane recovery and use.
- U.S. and China representatives met and engaged on current technical and policy developments in CMM.

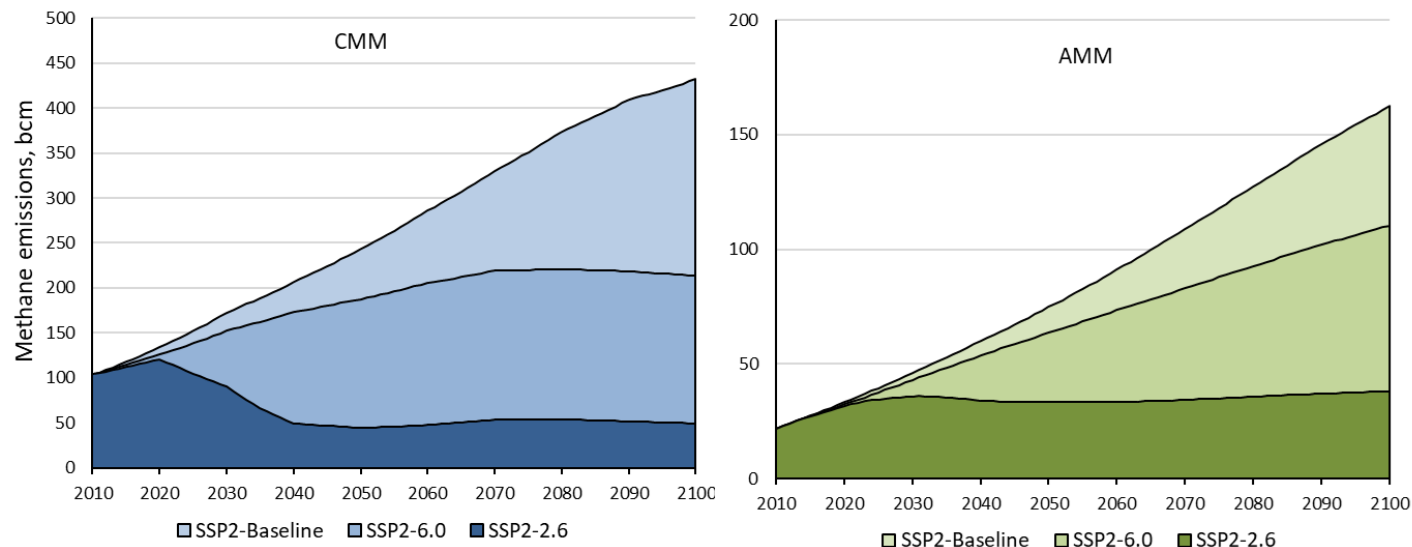
Yangquan Coal Group VAM Site Tour

- Yangquan Coal Group, one of the biggest coal mine groups in China, began to drain and utilize the CMM in the early 1950s. Utilization methods included CMM power generation, household use, and CMM liquefaction.
- In late 2019, USEPA participated in a study tour organized by the Yangquan Coal Group the Shanxi Province.
 - Visited the Ventilation Air Methane (VAM)-to-Power project at Yangquan Coal Group's Mine #2 and a nearby coal mine methane (CMM) project.
- The VAM project uses 6 oxidizers & generates 15 megawatts (MW) of power.
- The VAM-to-Power project is one of two operating worldwide. Success and transferability of the project could lead to replication with considerable greenhouse gas (GHG) mitigation potential.



Research Publication in Open Access

- Published a study estimating global CMM and AMM emissions using modelling analysis. The article is open access.
 - Kholod, N., Evans, M., Pilcher, R.C., Roshchanka, V., Ruiz, F., Coté, M., Collings, R., 2020. Global methane emissions from coal mining to continue growing even with declining coal production. Journal of Cleaner Production. <https://doi.org/10.1016/j.jclepro.2020.120489>

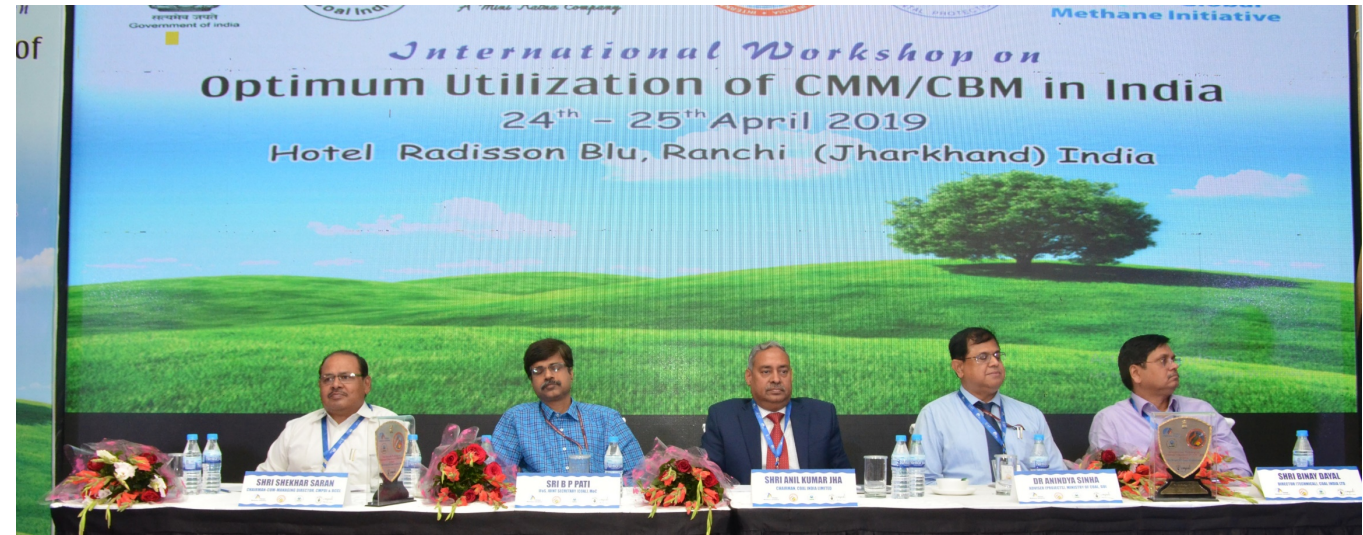


India CBM/CMM Clearinghouse

- The India CBM/CMM Clearinghouse has functioned at CMPDI (Ranchi) under the aegis of the Ministry of Coal and U.S. EPA since 17 November 2008 (with financial support from CIL-CMPDI on behalf of the Ministry of Coal, Government of India and GMI). It is facilitating development of CBM & CMM projects in India, knowledge sharing, and training to students.
- CMPDI is the Principal Implementing Agency (PIA) for the development of CBM & CMM in CIL & its Subsidiaries Leasehold areas.
- A CMM Drainage project at Moonidih UG Mine (BCCL), Jharia Cf is planned for the recovery of methane from coal seams to enhance mine safety, gainful utilization of recovered methane gas, and coal production. A Global Tender for Selection of experienced Technology Provider has been published (offers can be submitted until 4 September 2020).
- Global Tenders published at <https://coalindiatenders.nic.in> for the Selection of CBM Developer (CBMD) for Jharia CBM Block-I and Raniganj CBM Block (offers can be submitted until 10 August 2020).

India CBM/CMM Clearinghouse

- A series of workshops has been organized at Ranchi (Jh) India on CBM & CMM Development.
- An international workshop on “Optimum Utilization of CBM/CMM in India” was conducted on 24 – 25 April 2019 in Ranchi (jointly sponsored by CIL-CMPDI and GMI under aegis of Gol-MoC).



Welcome to Our New Coal Mines Subcommittee Delegate!

- We would like to welcome our newest member of the GMI Coal Mines Subcommittee!

Dr. Ozgen Karacan
Research Petroleum Engineer
U.S. Geological Survey
United States



Thank you!

**Co-Chairs, Coal Mines Subcommittee
Global Methane Initiative**