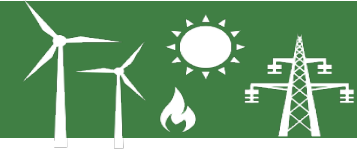


Coal-associated methane: A persistent and growing problem

Raymond Pilcher,
Chair, Group of Experts on Coal Mine Methane

ENERGY



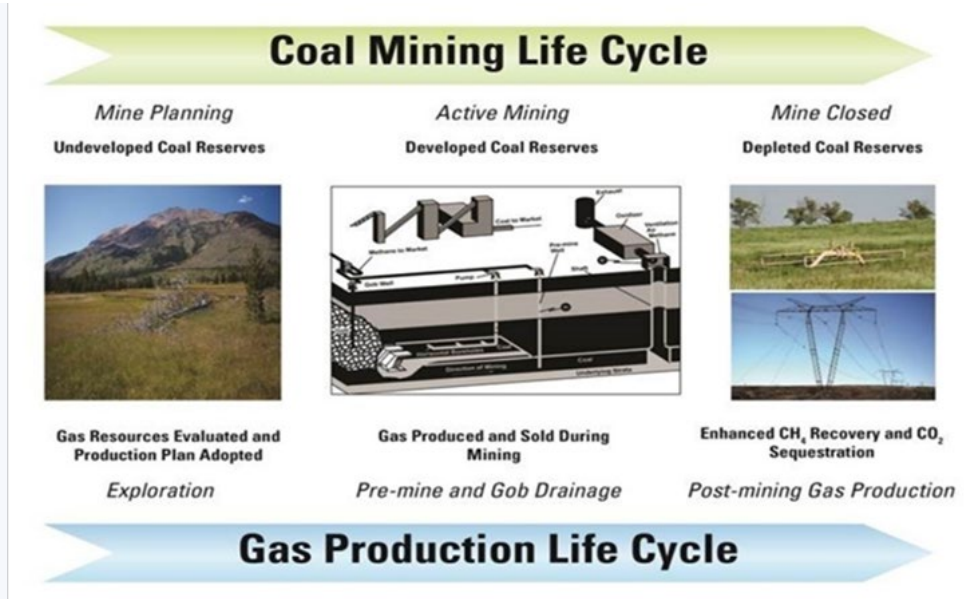
Agenda Item 6: Methane Management
Technical session

22 September 2021





The what, where, and why



This illustrates the coal mining lifecycle at a gassy coal mine. When the mine closes, the methane in the void and surrounding strata could become a source of fugitive emissions. Sustainable mine closure planning could present options for efficiently capturing, using, or at minimum, destroying this powerful greenhouse gas

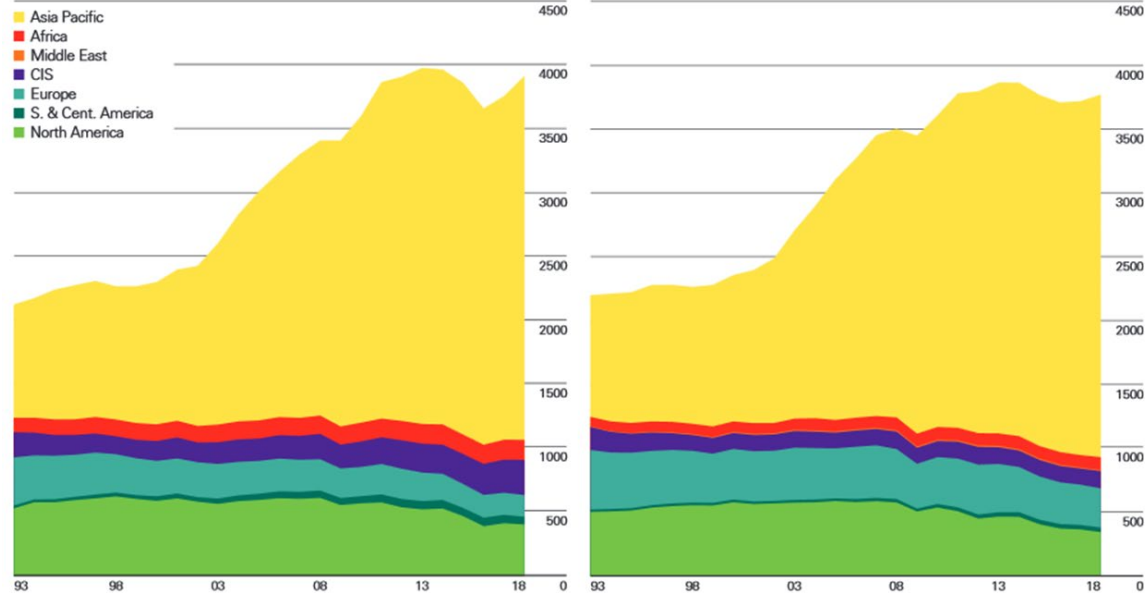
- Methane may become trapped in coal and held there under pressure until depressurized by mining or gas extraction activities
- Not all coal mines are gassy, but many underground and surface mines release gas during mining and after coal extraction ceases.
- Gassy coal is extracted from underground and surface mines in every country where coal is produced

The future—more CH₄ from coal mining

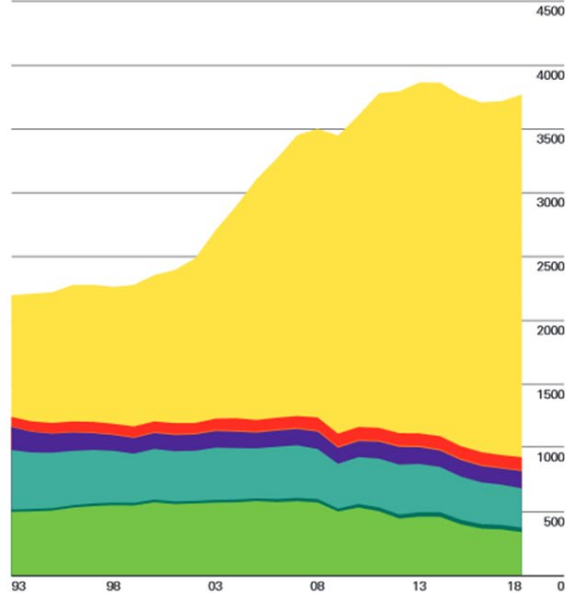
ENERGY



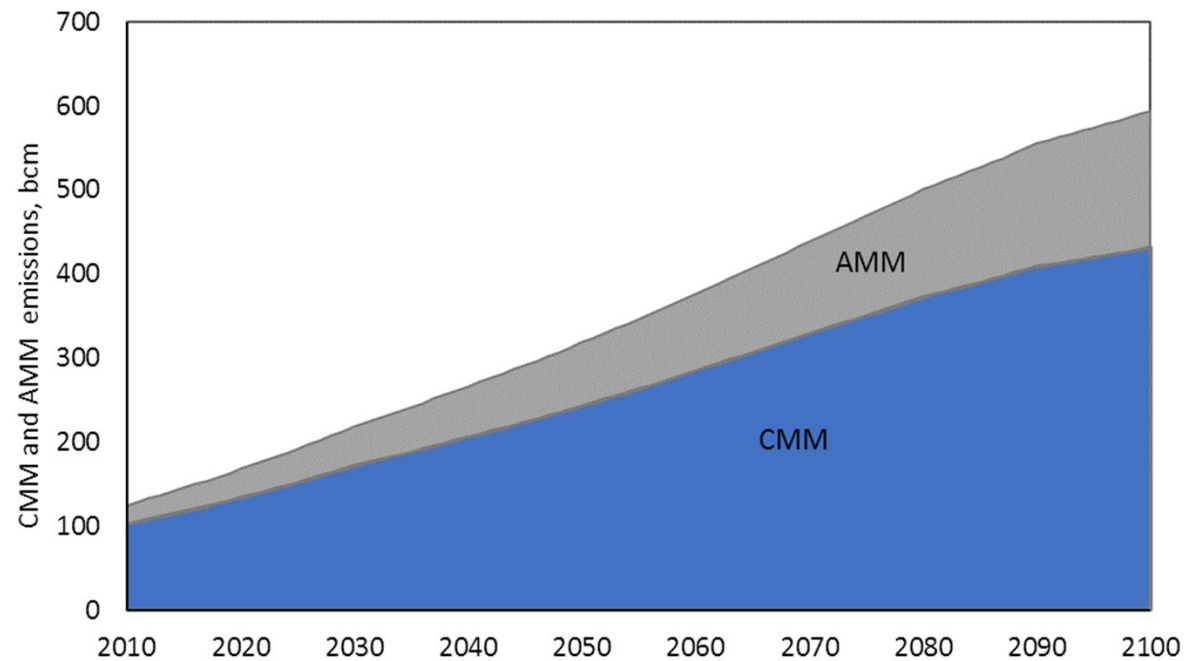
Coal: Production by region
Million tonnes oil equivalent



Coal: Consumption by region
Million tonnes oil equivalent



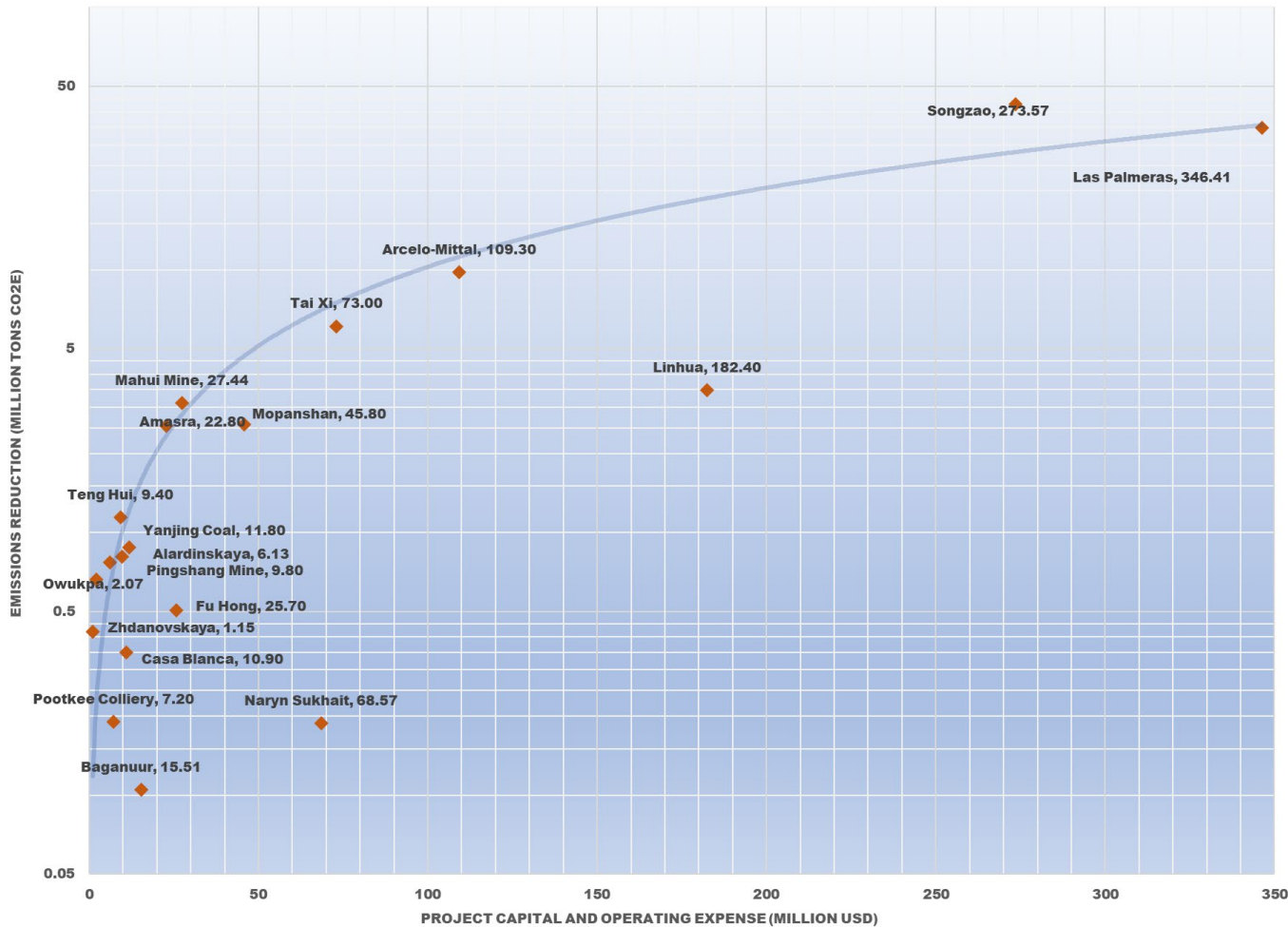
IEA, 2019



Kholod et al , 2020



Cost Effective Opportunities



Country	Count	Average CAPEX+OPEX per ton of CO ₂ e
Colombia	2	\$20.56
India	1	\$37.91
Kazakhstan	1	\$11.13
Mongolia	2	\$256.22
Nigeria	1	\$3.12
Russia	1	\$7.96
Turkey	1	\$8.94
Ukraine	1	\$2.74
China	9	\$23.12

World Bank, 2021, research project in progress, Pelon and Pilcher

Coal related methane emissions reductions can be a cost-effective approach rivaling emissions reductions from CCS and CCUS

Raising the GWP value of methane to reflect reality of this short-lived climate pollutant will increase economic efficiency and spur new project development



ENERGY



Thank you!

