2024 Global Methane Forum

Mobilizing Methane Action

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United States of America Update

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Global Methane Initiative
Leading methane action since 2004

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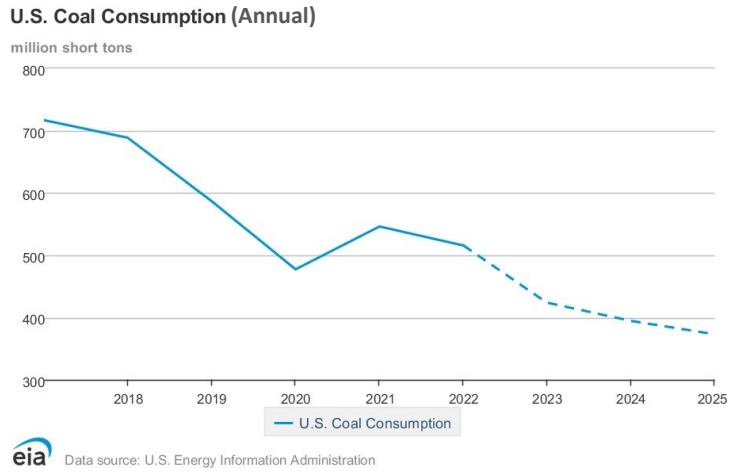
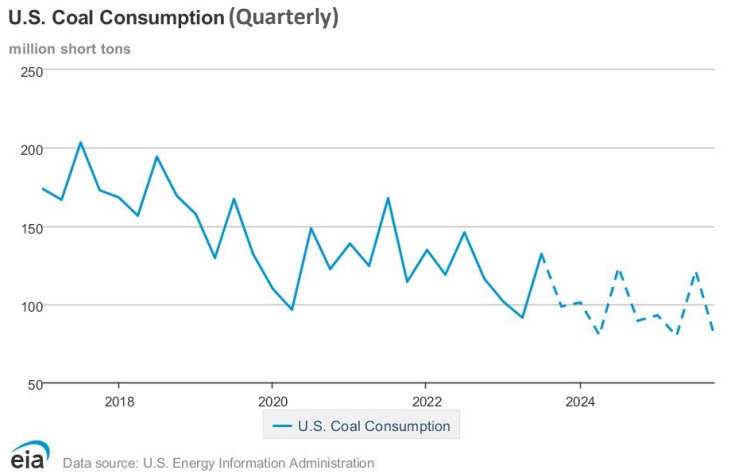
Global Methane Hub

CLIMATE & CLEAN AIR COALITION
TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS
a UNEP convened initiative

Coal Sector Trends Over the Past 5 Years

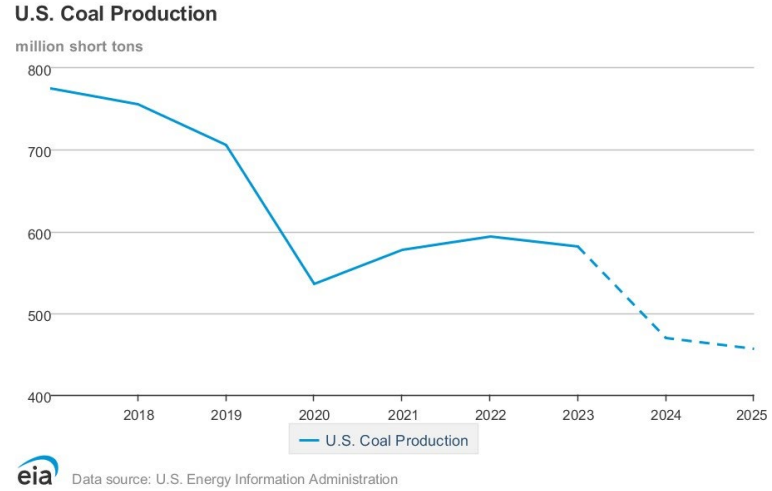
- Demand for coal nationally:
  - In 2022, U.S. coal consumption decreased 5.5% from 2021 to 516 MMst.
    - The electric power sector accounted for about 92% of the total U.S. coal consumed in 2022.
  - In the 3rd quarter of 2023, the U.S. coal consumption totaled 131.9 MMst, which was ~10% lower than the 3rd quarter of 2022.
  - Coal demand is projected to decrease for 2023 and 2024 because of:
    - Fewer coal-fired power plants compared to past
    - The ones still operating are running less
    - Power producers buy less coal to decrease large stockpiles.
  - EIA forecasts that coal consumption by the power sector will fall by 7% in 2024 and then will decline by 6% in 2025.

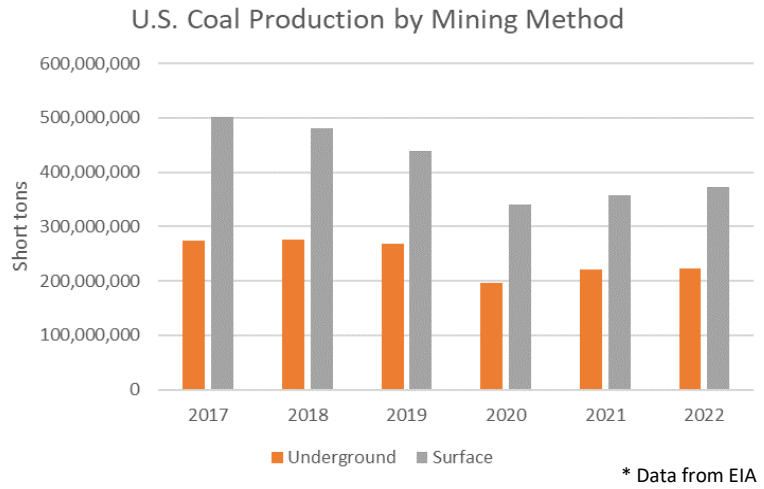




Coal Sector Trends Over the Past 5 Years

- Coal production:
  - Coal production declined between 2017 and 2020, with a bounce back in 2021 and 2022. However, in 2022:
    - Production from underground mines declined 19% compared to 2017.
    - Surface coal mine production declined 26% compared to 2017.
  - Energy Information Administration (EIA) expects coal production to decrease 19% in 2024 as domestic consumption of coal falls and inventories decline. Coal production in the forecast falls by a further 3% in 2025.
  - In 2022, U.S. coal mines hired 4064 more employees compared to 2021, although productivity decreased by ~9% from 2021 to 6.1 tons per employee hour.





* Data from EIA

Coal Sector Trends Over the Past 5 Years

- Operating coal mines
  - By the end of 2020, the number of producing coal mines in the U.S. decreased to 546 (146 underground and 350 surface).
  - In 2021, 40 coal mines were idled or closed (506 mines).
  - In 2022, 33 mines were opened or reactivated (539 mines).
- Most mine openings/closures happened in Appalachian Basin.
  - Pennsylvania bituminous coal and anthracite regions closed 12 mines between 2021 and 2022.
  - West Virginia gained 16 mines during the same period, while Kentucky added 10 mines.
- In general, there is less investment in coal industry for new mines.
  - Increased coal prices and increased exports, especially for metallurgical coal, support the industry.

Coal Mine Methane Outlook

Methane emissions from coal mines:

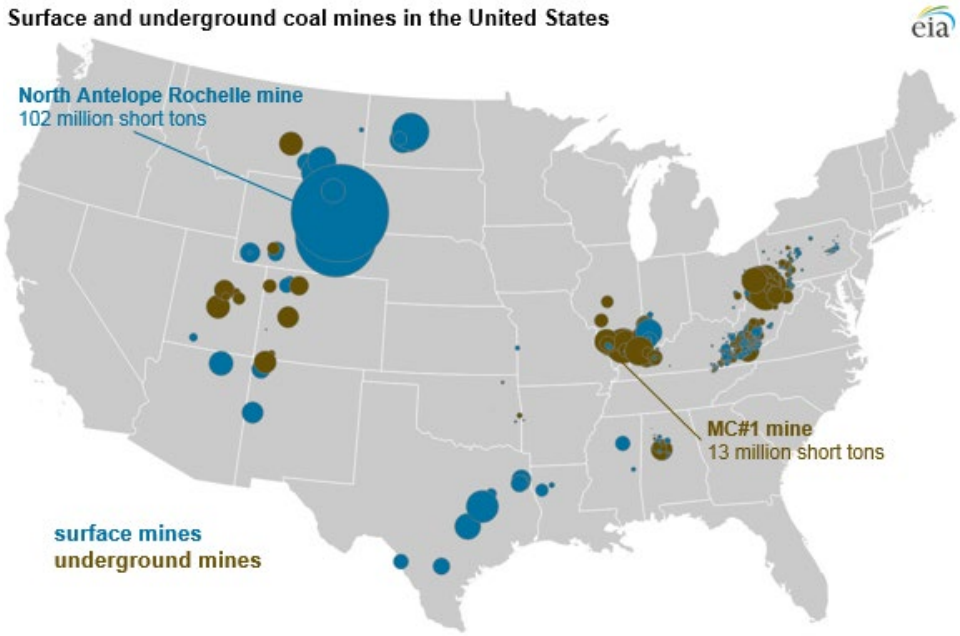
- Active underground: 33 MM tCO_2e in 2021.
- Abandoned underground: 9.2 MM tCO_2e in 2021.

Recent developments in coal mine methane mitigation:

- As of January 2024, 21 active coal mines hosted 29 CMM projects, and 61 abandoned (closed) coal mines hosted 34 abandoned mine methane projects.

Policies that support mitigation of coal mine methane:

- California's cap-and-trade is offering $38/tonne of CO_2 equivalent (pipeline injection does not qualify).



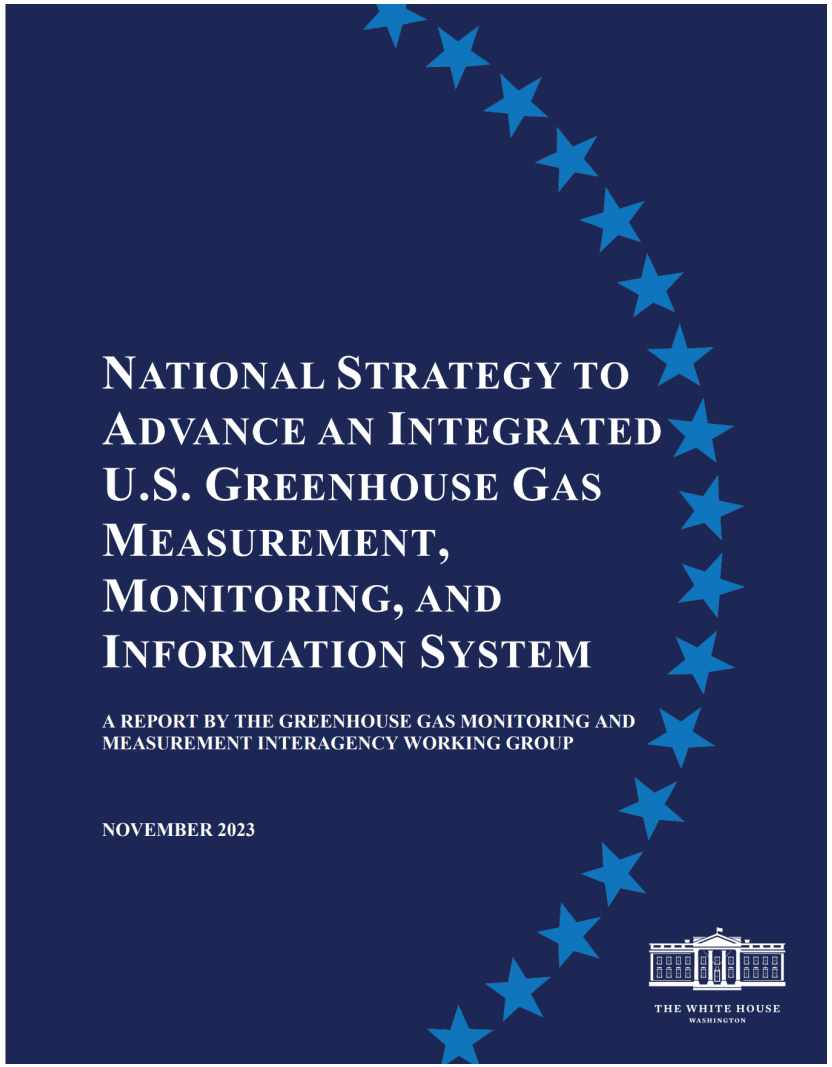
CMM Projects in the United States (2021 data)

Mine Type	Number of Projects	Use in Pipeline	Use in Electric Generation	Use in Heaters	Use in Boiler/ Dryer	Flare	Gob well vacuum pumps	VAM
Active underground	22	9	1	1	1	7	2	1
Abandoned underground	36	21	2	0	0	13	0	0

Source: U.S. EPA, 2023.

- In 2021, CMM projects avoided 18.3 $MMTCO_2e$ in methane emissions from active mines.
- In 2021, AMM projects avoided 2.9 $MMTCO_2e$ in methane emissions at abandoned mines.

News



- Released in November 2023.
- The GHG IWG is co-led by the Office of Management and Budget (OMB), Office of Science and Technology Policy (OSTP), and White House Climate Policy Office (CPO).
- Federal Agencies.
- Coal mines:
  - Form a Coal Mine Emissions Working Group that will coordinate federal efforts to improve methane emissions estimates from coal mines
  - Reconcile methane emissions estimates from atmospheric-based approaches with activity-based approaches at active underground coal mines