

WEST VIRGINIA DEVELOPMENT TO CAPTURE MINE METHANE EMISSIONS

SUMMARY

The following paper highlights the environmental, economic and investment impacts of capturing methane emissions in West Virginia emitted by mines.

Annual emissions from underground coal mines, or coal mine methane (CMM), in West Virginia totaled **11.5 million metric tonnes of CO₂e in 2019**. This analysis approximated that the current pace of mining will continue and resulting emissions will raise throughout time. Estimating a 5-year deployment of methane capture infrastructure at which all forecasted emissions would be captured, the analysis predicts WV CMM Capture projects would reduce emissions by a total of **236 million metric tonnes of CO₂e over a 20-year timeframe**.

Over the lifetime of a WV CMM Capture project, the analysis approximates a **\$2.5 billion investment in infrastructure and \$3.3 billion in operating expenses will be required. To justify these expenses**, a carbon price of at least \$35 per metric tonnes of CO₂e was estimated as the breakeven required incentive.

Fewer than 3% of America's producing coal mines are seeking opportunities to abate methane emissions. Incentivizing the market to capture and sell CMM furthers environmental progress, creates jobs, and enhances grid reliability, but policy solutions are needed to achieve desired outcomes.

Chart 1: Annual WV Emissions Reduced from Capture Project

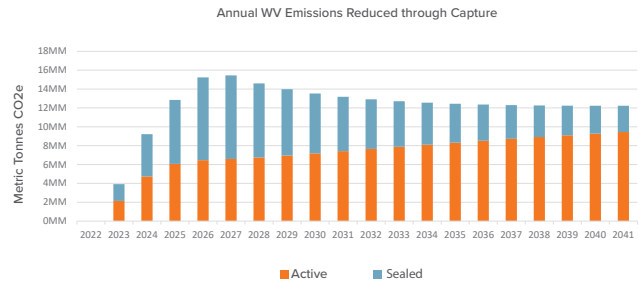


Chart 2: Projected Jobs Generated from Capture Project

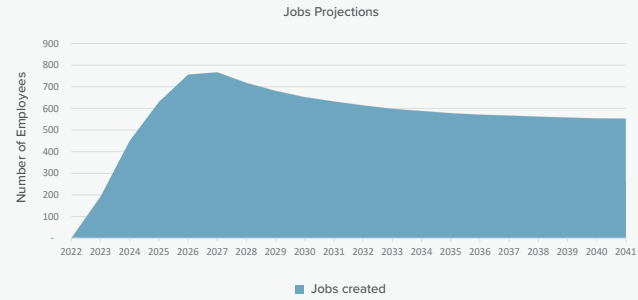


Chart 3: Capital Investment for Infrastructure Buildout

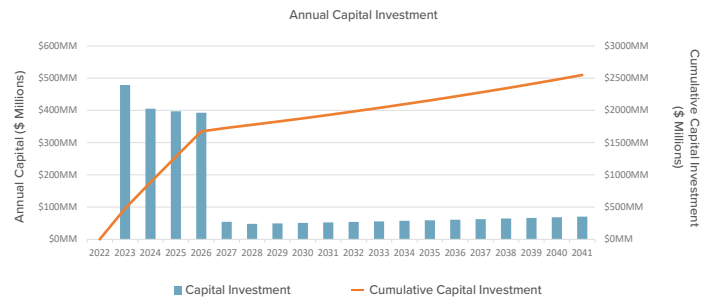


Chart 4: Annual Project Operating Costs

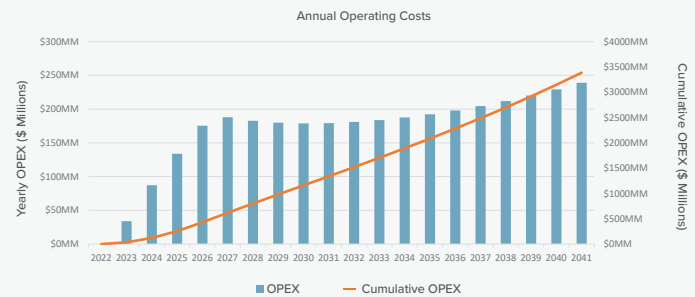
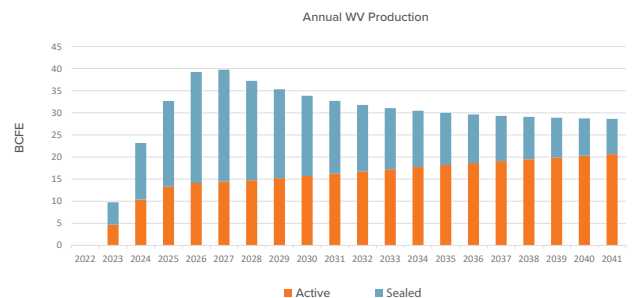


Chart 5: WV CMM Production in Capture System



THE DEVELOPMENT OF MINE METHANE CAPTURE IN WEST VIRGINIA IS CAPABLE OF GENERATING AN AVERAGE



Jobs, GDP Growth

*Job totals include direct, indirect & induced



West Virginia State and Local Tax Contributions



Federal Tax Contributions

	5 YEARS	10 YEARS	20 YEARS
Jobs, GDP Growth	 1,251 jobs \$494.8M contributed to the state's GDP	 1,355 jobs \$1.1B contributed to the state's GDP	 1,403 jobs \$2.7B contributed to the state's GDP
West Virginia State and Local Tax Contributions	 \$44.9M	 \$110.5M	 \$44.9M
Federal Tax Contributions	 \$80.7M	 \$191.8M	 \$443.3M