August 2, 2024

Re: Comment on Proposed Guidance for Clean Electricity Production Credit

To Whom It May Concern,

I am writing on behalf of the Waste Gas Capture Initiative (WGCI) to express our enthusiastic support for the proposed regulations for the Inflation Reduction Act's (IRA) 45Y Clean Electricity Production Credit, as outlined in the [recent announcement](https://home.treasury.gov/news/press-releases/jy2376) from the U.S. Department of the Treasury and the Internal Revenue Service (IRS). The WGCI is committed to expanding fugitive methane capture practices, and we commend the Treasury for its dedication to exploring additional electric generation pathways, especially the capture and utilization of fugitive methane from sources like coal mines.

The environmental benefits of mine methane capture are substantial and play a vital role in fostering a robust and sustainable electric generation economy. The proposed rules correctly highlight the immense potential of fugitive methane capture and utilization to significantly reduce greenhouse gas (GHG) emissions, particularly by using fugitive methane as a feedstock for electric generation. The capture and productive use of fugitive methane under the proposed rules will create thousands of jobs in historic energy-producing communities left behind by the clean energy transition.

**Importance of methane emissions reduction**

Methane, a potent greenhouse gas with a global warming potential over 28 times greater than carbon dioxide over a 100-year period, contributes substantially to climate change. The U.S. Environmental Protection Agency's (EPA) [Coalbed Methane Outreach Program (CMOP)](https://www.epa.gov/cmop) data indicates that methane emissions from coal mining and abandoned coal mines accounted for [approximately eight percent](https://www.epa.gov/cmop/about-coal-mine-methane) of total U.S. methane emissions in 2019. The inclusion of mine methane capture in the proposed regulations aligns with broader goals to achieve significant emissions reductions.

Recent [analyses](https://cgs.umd.edu/sites/default/files/2022-08/All-In%20to%202030_Methane.pdf) highlight the United States' potential to achieve methane emissions reductions of over 30 percent by 2030, a critical target in addressing climate change. The WGCI applauds the Treasury's proactive stance in recognizing mine methane capture as a key tool to help the U.S. achieve these ambitious climate goals. Analogous low carbon gases such as Renewable Natural Gas benefit greatly from existing federal incentives available through the Renewable Fuel Standard (RFS) and state clean fuels programs. These programs encouraged billions of dollars of investments and yielded an estimated 38,500 energy transition jobs in 2022 through the widespread deployment of capture systems for beneficial use and reduced methane emissions from waste sources such as agriculture, municipal solid waste, and wastewater treatment facilities nationwide. With the implementation of fugitive methane pathways under the IRA, capture for beneficial use of coal mine methane (CMM) is anticipated to follow a similar development trajectory.

**Fugitive methane's role in clean electric generation**

The proposal's acknowledgment of fugitive methane, including CMM, as an impactful feedstock for electric generation is particularly commendable. Fugitive methane, when captured and utilized as a feedstock, not only transforms a potential environmental hazard into a resource but also plays a pivotal role in advancing and diversifying clean energy production and displacing consumption of conventional sources of fossil fuels.

It is of key importance to highlight that CMM capture technology deployment is completely independent of mining operations and the incentives that would be applicable under the IRA would not impact mine operational plans with respect to development or production activities. The WGCI would like to clearly state that the value of methane incentives as contemplated in the IRA are not substantial enough to alter mining plans as new coal operations require billions of dollars of investment per project. Capture project operators are typically entirely separate entities from mine operators and the decision to implement capture technology is made as a discrete investment decision by the capture project operator on a borehole-by-borehole basis. Incentives recognized under the IRA would be used by capture project operators to fund necessary infrastructure for the capture and productive use of waste methane and provide investment justification for new project development.

Less than one percent of coal mines currently capture fugitive methane. Today's limited incentives – which in most cases don't recognize climate benefits of captured CMM when it is put to beneficial use – are not able to catalyze or maintain methane abatement, as also evidenced by the 66 percent decrease in mines performing CMM use since 2010. The 45Y program is an unprecedented opportunity to not only decarbonize electric generation in a technology-neutral manner as intended by Congress, but also to break the status quo limiting methane abatement from active and inactive mining operations.

Including fugitive methane as a pathway for clean electric generation would encourage a standardized approach to managing CMM emissions and enable the kind of capital deployment needed to stop future CMM emissions. Stated simply, putting fugitive methane to productive use as a low carbon fuel resource through 45Y would provide a market incentive to support the deployment of capture systems.

We also highlight that certain provisions suggested by the Treasury in the proposed rule require strong refinement lest the program becomes unconducive to fugitive methane-based electric generation. Key areas include waste designation, waste production anti-abuse, and First Productive Use requirements and how they are applied to CMM. CMM is a waste, and all capture of CMM is a passive waste management technique. Incentives for CMM capture will not increase waste generation or perpetuate mining activities. Importantly, this is a waste gas that is mandated to be emitted into the atmosphere for safety purposes, meaning the venting will continue while mining is ongoing and for years after closure or mining is complete. The value of any potential incentive would be directed to the actual capture and infrastructure system for utilization of the methane, as compared to the standard practice of venting or, in few instances, flaring. The 45Y incentive will not lead to continued or new mining activities, but instead can help lower the emissions coming from these ongoing or legacy activities.

Due to the expansive nature of active and abandoned mine complexes, any meaningful capture systems and abatement projects will require multiple point sources to be installed (i.e., boreholes). Capturing new CMM source boreholes for beneficial use is an incremental, discrete investment decision that is unjustified economically today since the capture and collection infrastructure for each borehole has significant investment and ongoing operational expenditure demands. It is thus important that the final regulations recognize this important circumstance and establish that the First Productive Use requirement is to be applied on a CMM source borehole basis.

Further supporting the importance of CMM as a low carbon fuel, CMM was included in the Department of Energy's (DOE) 2023 GREET R&D model with a carbon intensity score representative of the environmental benefits associated with methane capture for productive use. By harnessing fugitive methane for electric generation, we can significantly reduce the carbon footprint associated with electric generation. This approach aligns with the broader vision of an energy economy that is both economically viable and environmentally responsible. We request that the Coal Mine Methane / Waste Gas Capture and Utilization pathway present in R&D GREET be utilized as the measurement tool for lifecycle greenhouse gas emissions by electric producers leveraging CMM to displace natural gas going into their process.

**Economic benefits**

In addition to its environmental advantages, capturing fugitive methane and utilizing it for electric generation can drive economic growth and generate thousands of good-paying jobs, particularly in regions hit hard by the clean energy transition. By promoting the development of strong fugitive methane capture and clean electric generation industries in the U.S., we can spur innovation and job creation, moving the nation toward a sustainable, low-carbon future.

Recent analysis highlights the potential in West Virginia, the top state for CMM emissions by volume. Their estimates indicate that capturing coal mine methane could reduce emissions by 236 million metric tons of carbon dioxide equivalent over a 20-year period. Additionally, this effort would create more than 1,400 jobs and contribute $2.7 billion to West Virginia's gross domestic product (GDP), supporting a state and region that has long relied on the energy industry to support its economy.

**Key IRA provisions to enable successful mine methane capture**

The WGCI encourages the Treasury to finalize rules that address fugitive methane emissions and advance the clean energy transition through the proposed regulations. The WGCI believes that mine methane management should be a cornerstone in the nation's efforts to reduce emissions, create jobs, and foster a low-carbon economy. To ensure the successful inclusion of mine methane under the IRA, the WGCI encourages the Treasury to consider the following policy implementation factors:

*Acceptance of GREET R&D to assess lifecycle emissions*

The WGCI strongly advocates that the Treasury accept Argonne National Laboratory's GREET R&D model as the sole lifecycle analysis tool under the program. Treasury should include the CMM and Waste Gas Utilization pathway recognized by the R&D GREET Model and incorporate the R&D GREET Model's methodology for measuring lifecycle GHG emissions, including methane emissions avoidance accounting and blending.

*Anti-abuse and causality*

45Y incentives would go toward clean electric generation facilities and CMM mitigation. The deployment of CMM capture technology is unrelated to mining activities, meaning inclusion in the 45Y program would not increase mining activity or waste production. When adopting reasonable waste production anti-abuse rules to mitigate waste causality, the IRS and the Treasury should not "freeze" or disallow CMM waste streams that existed on or before the enactment of the IRA as reported to the Greenhouse Gas Reporting Program ("GHGRP"). Alternatively, the IRS and the Treasury should (a) provide that qualifying sources include mines that had Mine Safety and Health Administration ("MSHA") IDs prior to January 1, 2023, or (b) follow European and Asian market waste product registration methodologies. If adopted as previously proposed, the overly restrictive provisions would disqualify the currently highest polluting mines and best candidates for new CMM capture projects as the most prolific sources of CMM pollution have been installed after 2023.

*Avoid broad first productive use restrictions*

The first productive use requirement, especially if implemented as drafted, is overly burdensome and will unnecessarily restrict opportunities to decarbonize electric generation as well as curtail methane abatement at scale. Other relevant federal programs, such as the EPA's Renewable Fuel Standard (RFS), have no such requirements for Renewable Natural Gas (other fugitive methane). Overly restrictive provisions would disqualify the currently highest polluting mines and best candidates for new CMM capture projects where legacy capture operations were shuttered due to a lack of economic justification. Due to this fact and the lack of other incentives for the abatement and use of CMM, projects should not be obligated to demonstrate first productive use in order to qualify. If it is determined that first productive use requirements are applicable, then, taking into account the process outlined above, the CMM source should be defined as an individual borehole or ventilation shaft.

The WGCI strongly encourages the Treasury to allow for the inclusion of a CMM pathway in clean electric generation that will encourage the reduction of fugitive methane emissions, increase capture for beneficial use, and drive capital investment supporting future methane mitigation.

**Mine methane capture: A cornerstone in America's emissions reduction**

We look forward to continued partnership and dialogue to ensure the final rules capture the full spectrum of environmental and economic benefits associated with fugitive methane capture and utilization. This practice is pivotal to advancing the electric generation landscape and cleaning our power grid.

Thank you for taking our comments under consideration. We are grateful for the opportunity to contribute to the development of needed regulations that will shape the future of electric generation and methane emissions reduction in the United States.

Michael Moore

Executive Director, Waste Gas Capture Initiative