



February 20, 2025

Dear Chair Feldman and Members of the Environment, Energy and Education Committee,

On behalf of the undersigned organizations, we write to oppose SB 480. Although we support the General Assembly's effort to mitigate the impacts of climate change by investing in clean, renewable energy sources, as currently written, SB 480 does not establish any parameters on the type of biogas that may be procured through the pilot program. As a result, we are concerned that Maryland tax dollars may be spent on purchasing manure biogas—also known as factory farm gas—through this legislation.

Factory farm gas is not clean or renewable energy. It is a greenwashing measure that insufficiently reduces methane emissions¹ while upholding the unsustainable and unjust systems of industrial animal agriculture and fossil fuel energy.

¹ Imperial College London. (2022, June 17). *Biogas and Biomethane Supply Chains Leak Twice as Much Methane as First Thought*. ScienceDaily.

<https://www.sciencedaily.com/releases/2022/06/220617111456.htm>

Zhou, Y., Swidler, D., Searle, S., & Baldino, C. (2021, October). *Life-cycle Greenhouse Gas Emissions of Biomethane and Hydrogen Pathways in the European Union*. International Council on Clean Transportation.

<https://theicct.org/sites/default/files/publications/lca-biomethane-hydrogen-eu-oct21.pdf>

Waterman, C. & Armus, M. (2024). *Biogas or Bull****? The Deceptive Promise of Manure Biogas as a Methane Solution*. Friends of the Earth, 33-38.

https://foe.org/wp-content/uploads/2024/02/Factory-Farm-Gas-Brief_final-final.pdf

For years now, frontline communities and environmental advocates have raised environmental justice concerns about funding manure biogas production due to its reliance on concentrated animal feeding operations (CAFOs)—also known as factory farms.² These heavily polluting livestock facilities generate massive amounts of waste that threaten rural economies, public health, and quality of life for the surrounding Maryland populations, which are disproportionately communities of color and low-income communities.³

Factory farm gas systems are typically only feasible at the largest CAFOs⁴ and rely on the existence and perpetuation of the most hazardous manure management practices, wet manure maintained in large lagoons or pits, that contribute to air and water pollution.⁵ Meanwhile, manure biogas production entrenches this dirty system all while failing to address:

- Greenhouse gas emissions from feed production and enteric fermentation.
- Most forms of localized air and water pollution from CAFOs that threaten public health and the environment.
- The overuse of antibiotics administered to livestock, a driver of antibiotic resistance in humans.
- The threat of infectious diseases like avian influenza emerging from factory farms, potentially leading to another pandemic

² Friends of the Earth et al. (June 13, 2023). [Letter to Secretary Vilsack and Undersecretary Torres Small]. Retrieved from <https://foe.org/wp-content/uploads/2023/06/REAP-Letter-USDA-June-2023.pdf>
Friends of the Earth et al. (October 25, 2023). [Letter to Secretary Vilsack]. Retrieved from https://foe.org/wp-content/uploads/2023/10/Final_-_Sign-on_-_Opposition-to-Factory-Farm-Gas-Funding-and-Practices-in-IRA.pdf

³ Halden, R. U., & Schwab, K. J. (n.d.). *Environmental Impact of Industrial Farm Animal Production*. The Pew Commission on Industrial Farm Animal Production, 27–29.

<https://law.lclark.edu/live/files/6699-environmental-impact-of-industrial-farm-animal>

Hribar, C. (2010). *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities*. National Association of Local Boards of Health, 2-3.

https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf

Hall, J., Galarraga, J., Berman, I., Edwards, C., Khanjar, N., et al. (2021). Environmental Injustice and Industrial Chicken Farming in Maryland. *International Journal of Environmental Research and Public Health*, 18(21), 11039. <https://doi.org/10.3390/ijerph182111039>

⁴ US EPA. (2014, December 22). *Is Anaerobic Digestion Right for Your Farm?* [Overviews and Factsheets]. <https://www.epa.gov/agstar/anaerobic-digestion-right-your-farm>

⁵ Son, J.-Y., Miranda, M. L., & Bell, M. L. (2021). Exposure to concentrated animal feeding operations (CAFOs) and risk of mortality in North Carolina, USA. *The Science of the Total Environment*, 799, 149407. <https://doi.org/10.1016/j.scitotenv.2021.149407>

Donham, K. J., Wing, S., Osterberg, D., Flora, J. L., Hodne, C., Thu, K. M., & Thorne, P. S. (2006, November 14). Community Health and Socioeconomic Issues Surrounding Concentrated Animal Feeding Operations. *Environmental Health Perspectives*, 115(2), 317–320. <https://doi.org/10.1289/ehp.8836>

Halden, R. U., & Schwab, K. J. (n.d.). *Environmental Impact of Industrial Farm Animal Production*. The Pew Commission on Industrial Farm Animal Production, 27–29.

<https://law.lclark.edu/live/files/6699-environmental-impact-of-industrial-farm-animal>

Hribar, C. (2010). *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities*. National Association of Local Boards of Health, 2-3.

- Farmers locked in unfair contracts or workers facing dangerous working conditions on factory farms and in slaughterhouses.
- The suffering of more than nine billion animals raised for food in inhumane conditions.

In fact, **factory farm gas production generates additional environmental and public health concerns for communities living near CAFOs**, including increased ammonia emissions during anaerobic digestion,⁶ higher concentrations of nutrients in digestate that contribute to water pollution,⁷ and new pipelines and trucks to transport manure or biogas.

Subsidizing manure biogas production also increases the competitive advantage for large-scale producers, contributes to industry consolidation, and crowds out funding for truly effective conservation and renewable energy practices. Digesters, which are used to break down waste and create the biogas, are expensive to construct and operate, making them economically feasible only for the largest farms and only with considerable public subsidies in most cases. This further tilts the playing field in favor of the largest livestock operators that are positioned to capitalize on policies and incentives rewarding manure biogas production.

Incentivizing manure biogas production in Maryland is also concerning as the largest and most active livestock sector is the poultry industry.⁸ **Factory farm gas derived from poultry litter is especially problematic:** Raw poultry litter is dry and emits little methane under current production methods. Thus, in order to make an anaerobic digester feasible at a poultry operation, large volumes of water must be added to the manure.⁹ This not only diverts precious water resources but also has the potential to create novel methane emissions from digester leakage.

⁶ Aneja, Viney P., S. Pal Arya, Ian C. Rumsey, D.-S. Kim, K. Bajwa, H. L. Arkinson, H. Semunegus, et al. (2008). Characterizing ammonia emissions from swine farms in eastern North Carolina: part 2--potential environmentally superior technologies for waste treatment. *Journal of the Air & Waste Management Association* (1995), 58(9), 1145–1157. <https://doi.org/10.3155/1047-3289.58.9.1145>
 Agency for Toxic Substances and Disease Registry. (n.d.). *Medical Management Guidelines for Ammonia*. <https://wwwn.cdc.gov/TSP/MMG/MMGDetails.aspx?mmgid=7&toxid=2>

Holly, M. A., Larson, R. A., Powell, J. M., Ruark, M. D., & Aguirre-Villegas, H. (2017). Greenhouse gas and ammonia emissions from digested and separated dairy manure during storage and after land application. *Agriculture, Ecosystems & Environment*, 239, 410–419. <https://doi.org/10.1016/j.agee.2017.02.007>

⁷ USDA. (2017, October). *Conservation Practice Standard Anaerobic Digester (Code 366)*. https://www.nrcs.usda.gov/sites/default/files/2022-08/Anaerobic_Digester_366_CPS_Oct_2017.pdf

⁸ *Poultry Pollution*. (n.d.). Sierra Club. Retrieved February 13, 2025, from <https://www.sierraclub.org/maryland/poultry-pollution>

⁹ Tingi, K., Lee, K., Worley, J., Risse, M., & Das, K.C. (2010, January). Anaerobic Digestion of Poultry Litter: A Review. *Applied Engineering in Agriculture*. https://www.researchgate.net/publication/273919895_Anaerobic_Digestion_of_Poultry_Litter_A_Review

Maryland tax dollars should be spent incentivizing effective climate solutions, not rewarding some of the state's biggest polluters¹⁰ and perversely encouraging them to produce even more waste. We urge you to oppose this bill as written and instead support truly clean, renewable energy as well as farmers and ranchers employing regenerative agriculture practices that can effectively fight the climate crisis.

Sincerely,

Friends of the Earth
Sussex Health and Environment Network (SHEN)
Sentinels of Eastern Shore Health (SESH)
Center for Biological Diversity
Center for Food Safety
Clean Water Action
Climate Communications Coalition
Concerned Citizens Against Industrial CAFOs (CCAIC)
Envision Frederick County
Earthjustice
Families NOT Refineries
FarmSTAND
Food & Water Watch
Food Animal Concerns Trust
George Mason University Center for Climate Change Communication
Maryland Latinos Unidos
Maryland Legislative Coalition
Maryland Legislative Coalition - Climate Justice Wing
Maryland Pesticide Education Network

¹⁰ Shwe, E. (2020, October 21). *Report: Eastern Shore Has Unhealthy Levels of Nitrate in Drinking Water Due to CAFOs*. Maryland Matters.
<https://marylandmatters.org/2020/10/21/report-eastern-shore-has-unhealthy-levels-of-nitrate-in-drinking-water-due-to-cafos/>