

PUTTING LIPSTICK ON A PIG: BIOGAS, METHANE DIGESTERS, AND THE GREENWASHING PLAYBOOK

BY
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Industrial animal agriculture pitches biogas and methane digesters as solutions to the outsized methane footprint of concentrated animal feeding operations (CAFOs), yet these efforts merely seek to convey to the public that CAFOs' operations are environmentally responsible. In reality, quite the opposite is true because biogas and methane digesters more deeply entrench these facilities into the status quo of unsustainable production and disposal methods at CAFOs. This article first describes industrial animal agriculture's impacts on climate change, with a focus on methane emissions. It then addresses biogas and methane digesters as ineffective solutions to the methane emissions from CAFOs. Next, it examines how these misleading and inadequate responses in the industrial animal agriculture context parallel the fossil fuel industry's greenwashing campaigns with blue hydrogen and carbon capture and storage facilities. The article proposes long-term and short-term accountability mechanisms to promote the phaseout of biogas and methane digesters in CAFOs. Effective long-term measures would involve implementing disclosure and verification standards much like those that are starting to be implemented in the fossil fuel industry context. These legislative efforts take time, however, and have not yet been implemented in the United States. In the meantime, an effective short-term response would be to pursue strategic litigation to raise awareness of and apply pressure to phase out these harmful measures by drawing on best practices from greenwashing lawsuits in the fossil fuel context.

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I. INTRODUCTION

In the United States, billions of food animals are raised in concentrated animal feeding operations (CAFOs), commonly referred to as “factory farms,” which produce massive amounts of waste.¹ The waste generated from CAFOs is a multi-faceted public enemy that causes dangerous impacts to air and water quality,² animal welfare,³ worker safety,⁴ and fenceline communities.⁵ Yet the most destructive long-term impact of CAFOs is how they are propelling the climate change crisis by clinging to this destructive status quo of operation and failing to reduce and phase out their significant greenhouse gas emissions, especially from

¹ Lindsay Walton & Kristen King Jaiven, *Regulating CAFOs for the Well-Being of Farm Animals, Consumers, and the Environment*, 50 ENV'T L. REP. 10485, 10486 (2020) (“It is estimated that nine billion confined U.S. farm animals produce almost one million tons of manure daily....”); Patty Keough, *Manure-to-Energy Projects—Greenwashing or a Real Solution to Reducing Methane Emissions from Livestock Production?*, LEWIS & CLARK L. SCH.: ENV'T, NAT. RES., & ENERGY L. BLOG (Jan. 23, 2023), <https://college.lclark.edu/live/blogs/216-manure-to-energy-projects-greenwashing-or-a-real> (“According to estimates, livestock in the U.S. produce between 3–20 times more manure than humans in the U.S.—as much as 1.37 billion tons of manure per year.”).

² Walton & King Jaiven, *supra* note 1, at 10486.

³ *Id.* at 10487.

⁴ For a discussion of worker safety issues at CAFOs, see F. M. Mitloehner & M. S. Calvo, *Worker Health and Safety in Concentrated Animal Feeding Operations*, 14 J. AGRIC. SAFETY & HEALTH 163, 167 (2008), discussing how farm workers are highly vulnerable to injuries and that some studies suggest CAFOs are the leading cause of injuries due to lack of precautions taken around animals.

⁵ Walton & King Jaiven, *supra* note 1, at 10487; Daina Bray, *The Climate Problem of Animal Agriculture: What can Law, Technology, and We Do About It?*, AM. BAR ASS'N (Dec. 14, 2023), https://www.americanbar.org/groups/science_technology/publications/scitech_lawyer/2024/fall/climate-problem-animal-agriculture (noting that industrial animal agriculture has numerous negative consequences, including environmental justice issues). Fenceline communities are those immediately adjacent to highly polluting facilities, including CAFOs. See *Frontline and Fenceline Communities*, CLIMATE REALITY PROJ., <https://www.climateRealityproject.org/frontline-fenceline-communities> (last visited Jul 25, 2024) (defining “fenceline communities”); see also *THE SMELL OF MONEY* (Beyond The Pines 2022); *THE SMELL OF MONEY*, <https://www.smellofmoneydoc.com> (last visited Mar. 18, 2024) (describing the film as a documentary detailing health and environmental impacts of CAFOs on fenceline communities).

methane. According to a report released during COP27, the combined methane emissions of fifteen of the world's largest meat and dairy companies "far exceed" the total methane footprint of many of the world's highest methane-emitting countries.⁶

To add insult to injury, sometimes the purported "cure" can be more dangerous than the "disease." In response to public pressure to reduce harmful methane emissions, CAFOs have adopted biogas and methane digesters as their methane management practices to convey to conscientious consumers that these facilities are undertaking environmentally beneficial measures.⁷ Not only are these measures not solutions to the methane emissions problem at these facilities, but they also risk making the problem worse in the long run by increasing demand for the destructive practices of factory farming. Worse still, these efforts have been communicated to the public as a "win-win" solution that enshrines this harmful, low-cost method of production while purportedly protecting the environment through managing the pollution impacts from these facilities and producing "renewable energy."⁸

This deceptive approach mirrors the fossil fuel industry's responses to the threats that its greenhouse gas (GHG) emissions pose to the global climate change crisis. Their false solutions are: (1) blue hydrogen⁹ and (2) carbon capture and storage.¹⁰ Like biogas and methane digesters, these two responses by the industry seek to proceed with business-as-usual practices while attempting to communicate that these measures are making great strides in addressing climate change. It is not surprising

⁶ CHANGING MKTS. FOUND. & INST. FOR AGRIC. & TRADE POL'Y, EMISSIONS IMPOSSIBLE: HOW EMISSIONS FROM BIG MEAT AND DAIRY ARE HEATING UP THE PLANET 5 (2022), <https://www.iafp.org/emissions-impossible-methane-edition>; see also Clara Gobbe, *COP 27 Continued to Ignore the Role of Animals in Climate Change*, WORLD FED'N FOR ANIMALS (Nov. 24, 2022), <https://wfa.org/cop-27-continued-to-ignore-the-role-of-animals-in-climate-change> (describing the report). For an explanation of COPs, see *UN Climate Change Conferences*, UNITED NATIONS, <https://www.un.org/en/climatechange/un-climate-conferences> (last visited Feb. 27, 2024).

⁷ Keough, *supra* note 1.

⁸ See *id.* ("Policymakers and agribusiness tout these 'manure-to-energy' projects as a 'win-win'...."); discussion *infra* Part III.A. Biogas (describing how biogas is portrayed as renewable energy).

⁹ Nina Lakhani, *Is Hydrogen Really a Clean Enough Fuel to Tackle the Climate Crisis?*, GUARDIAN (Mar. 7, 2023, 3:30 AM), <https://www.theguardian.com/environment/2023/mar/07/hydrogen-clean-fuel-climate-crisis-explainer> (explaining that the fossil fuel industry is heavily invested in blue hydrogen, which refers to hydrogen sourced from natural gas in a process that captures the carbon dioxide produced, and that while the industry claims to be able to capture 80–90% of carbon dioxide from blue hydrogen production, a study suggests that number is closer to 12%).

¹⁰ *Carbon Capture: The Fossil Fuel Industry's False Climate Solution*, EARTHJUSTICE (Sept. 19, 2023) [hereinafter *Carbon Capture*, EARTHJUSTICE], <https://earthjustice.org/article/carbon-capture-the-fossil-fuel-industrys-false-climate-solution> (asserting that the fossil fuel industry "wants to use carbon capture to enable fossil fuel facilities to keep operating—and polluting—while claiming to be part of the climate solution."); see *infra* Part IV.B. Carbon Capture and Storage (asserting that carbon capture and storage entrench the status quo, present cost and environmental concerns, and "ignore unknown consequences of large-scale geological storage of carbon dioxide").

that these two industries are engaged in similarly destructive practices and getting away with it. First, both industries are drowning in federal subsidies.¹¹ Second, even when there is political will to address the climate change impacts of these industries, the political power of these industries enables them to avoid strict regulation.¹² For example, the Biden Administration acknowledged the imminent need to regulate methane emissions in its Methane Emissions Reduction Action Plan,¹³ yet animal agriculture is only subject to voluntary measures.¹⁴

The challenge for effective regulation of the fossil fuel and animal agriculture industries is also stuck in neutral at the international level. For example, concrete language recognizing the need to phase out fossil fuels has not made it into a global climate agreement after three decades of global climate change negotiations. Even at COP28 in December 2023, advocacy for a fossil fuel phaseout fell short again, with only weak language calling for a “transition away” from fossil fuels making it into the language of the meeting’s final agreement.¹⁵ The climate COPs’ track record on addressing industrial animal agriculture’s impact on climate change is even worse. While COP27 did recognize agriculture and food systems as part of the climate change equation, the meeting “failed to tackle emissions and vulnerabilities caused by industrial animal farming that need to be addressed to halt and reverse global warming.”¹⁶ Worse still, despite the agreement on the transition away from fossil fuels, COP28 again failed to address the regulation of factory farming.¹⁷

As such, Part II of this Article describes industrial animal agriculture’s impacts on climate change, with a focus on methane emissions. Part III addresses biogas and methane digesters as ineffective solutions to the methane emissions from CAFOs. Part IV examines how

¹¹ Randall S. Abate, *Anthropocene Accountability Litigation: Confronting Common Enemies to Promote a Just Transition*, 46 COLUM. J. ENV’T L. 225, 243–44, 249–50 (2021).

¹² See *id.* at 240–42, 245–49 (detailing examples of government entities that have authority to impose regulations against CAFOs and the fossil fuel industry but instead allow the industry to escape regulation).

¹³ WHITE HOUSE OFF. OF DOMESTIC CLIMATE POL’Y, U.S. METHANE EMISSIONS REDUCTION ACTION PLAN 1, 3 (2021) [hereinafter BIDEN’S METHANE ACTION PLAN], <https://www.whitehouse.gov/wp-content/uploads/2021/11/US-Methane-Emissions-Reduction-Action-Plan-1.pdf>.

¹⁴ *Id.* at 11; see also Viveca Morris, *The Cow-Shaped Hole in Biden’s Methane Plan*, POLITICO (Nov. 16, 2021, 4:30 AM), <https://www.politico.com/news/agenda/2021/11/16/methane-emissions-cows-agriculture-climate-change-522550> (“[T]he White House’s climate plan for animal agriculture consists entirely of subsidizing ‘voluntary’ and ‘incentive-based’ methane-reducing technologies and practices.”).

¹⁵ *COP28 Ends with Call to ‘Transition Away’ from Fossil Fuels; UN Chief Says Phaseout is Inevitable*, U.N. SUSTAINABLE DEV. GRP., (Dec. 13, 2023), <https://unsdg.un.org/latest/stories/cop28-ends-call-%E2%80%98transition-away%E2%80%99-fossil-fuels-un-chief-says-phaseout-inevitable>.

¹⁶ Gobbe, *supra* note 6.

¹⁷ *COP28 Fails to Address Animal Agriculture*, WORLD ANIMAL PROT. (Dec.13, 2023), <https://www.worldanimalprotection.ca/news/cop28-fails-address-animal-agriculture> (noting that COP28 secured extensive global support for sustainable agriculture yet failed to acknowledge the critical need to regulate factory farming to mitigate climate change).

these misleading and inadequate responses in the industrial animal agriculture context parallel the fossil fuel industry's greenwashing campaigns with blue hydrogen and carbon capture and storage. Part V proposes long-term and short-term accountability mechanisms for biogas and methane digesters. Effective long-term measures would involve implementing disclosure and verification standards much like those that are starting to be implemented in the fossil fuel industry context. These legislative efforts take time, however, and have not been fully implemented in the United States.¹⁸ In the meantime, an effective short-term response would be to pursue strategic litigation to raise awareness of these deceptive practices and impose pressure to phase them out by drawing on best practices from greenwashing lawsuits in the fossil fuel context.

II. INDUSTRIAL ANIMAL AGRICULTURE'S METHANE EMISSIONS AND CLIMATE CHANGE

The climate change impacts of animal agriculture are well-documented and have received heightened scrutiny in recent years.¹⁹ CAFOs generate significant quantities of GHGs that contribute to global climate change, including carbon dioxide, nitrous oxide, and methane.²⁰ These facilities release GHGs through various processes, including “feed production, land use change, manure management, processing, transportation, and enteric fermentation.”²¹

CAFOs are responsible for significant methane emissions.²² Compared to carbon dioxide, methane is approximately 80 times more

¹⁸ See discussion *infra* Part V.A. Long Term: Implement Disclosure and Verification Standards (explaining that U.S. efforts include “two new climate disclosure laws” enacted by the California legislature and the Federal Trade Commission’s first efforts to revise its “Green Guides” in over a decade).

¹⁹ See, e.g., Melina Walling, *Agriculture Gets its Day at COP28, but Experts See Big Barriers to Cutting Emissions*, ASSOCIATED PRESS NEWS (Dec. 9, 2023, 8:51 PM), <https://apnews.com/article/cop28-meat-emissions-livestock-climate-cattle-c4153323be877da16d881ddef560815d> (discussing challenges in reducing emissions in the agricultural sector at COP28); George Monbiot, Opinion, *There's One Big Subject our Leaders Won't Touch at Cop27: Livestock Farming*, GUARDIAN (Nov. 9, 2022, 5:00 AM), <https://www.theguardian.com/commentisfree/2022/nov/09/leaders-cop27-livestock-farming-carbon-budget-governments> (highlighting the absence of discussion on livestock farming in the context of COP27 and its implications for carbon budgets and government actions).

²⁰ Bruce Myers & Linda Breggin, *Tackling the Problem of CAFOs and Climate Change: A New Path to Improved Animal Welfare?*, in WHAT CAN ANIMAL LAW LEARN FROM ENVIRONMENTAL LAW? 371, 375–76 (Randall S. Abate ed., 2d ed. 2020); see also Bray, *supra* note 5 (discussing how CAFOs generate harmful greenhouse gasses).

²¹ Bray, *supra* note 5. “Enteric fermentation” refers to the process by which cows and other ruminants expel methane as a product of their digestive processes. Myers & Breggin, *supra* note 20, at 376.

²² *Methane Emissions are Driving Climate Change. Here's How to Reduce Them.*, U.N. ENV'T PROGRAMME, (Aug. 20, 2021), <https://www.unep.org/news-and-stories/story/methane->

powerful as an atmospheric warming agent.²³ CAFOs' methane emissions primarily stem from livestock rearing and the storage and processing of massive amounts of manure.²⁴ Around a third of global anthropogenic methane emissions can be traced to animal agriculture.²⁵ Of all sources of methane in the United States, animal agriculture produces the most at 35.9%.²⁶

Reducing methane emissions is seen as a critical “low-hanging fruit” opportunity to slow global warming to reach climate goals.²⁷ At COP26 in 2021, representatives from over 100 countries signed the “Global Methane Pledge,” committing to reducing methane emissions by 30% by 2030²⁸; however, most measures to implement the pledge have focused on methane emissions from sources other than livestock, such as landfills and leaks in oil and gas pipelines.²⁹ Similarly, the Biden Administration’s Methane Action Plan and the Inflation Reduction Act (IRA)³⁰ have imposed strict limits on methane emissions from non-livestock sources, while adopting only voluntary and incentive-based approaches for addressing methane emissions from animal agriculture.³¹ Given this “hands-off” approach to the problem of methane emissions from industrial animal agriculture,³² it is not surprising that the industry’s efforts to greenwash their waste management practices through measures like biogas and methane digesters have been tolerated to date.

emissions-are-driving-climate-change-heres-how-reduce-them (“Livestock emissions . . . account for roughly 32[%] of human-caused methane emissions.”).

²³ Bray, *supra* note 5.

²⁴ Myers & Breggin, *supra* note 20, at 376–77.

²⁵ Bray, *supra* note 5.

²⁶ *Id.*

²⁷ *Global Flaring and Methane Reduction Partnership (GFMR): Methane from Oil and Gas Production Explained*, WORLD BANK, <https://www.worldbank.org/en/programs/gasflaringreduction/methane-explained> (last visited Aug. 16, 2024).

²⁸ *COP26: Together for our Planet*, UNITED NATIONS, <https://www.un.org/en/climatechange/cop26> (last visited Aug. 16, 2024).

²⁹ Bray, *supra* note 5.

³⁰ Inflation Reduction Act of 2022, Pub. L. No. 117–169, 136 Stat. 1818 (2022). Section 60113 of the Inflation Reduction Act (IRA) introduces an amendment to the Clean Air Act by incorporating a new provision, Section 136, on “methane emissions and waste reduction incentive program for petroleum and natural gas systems.” *Id.* sec. 60113, § 136, at 2073 (codified at 42 U.S.C. § 7436). Under this provision, a methane charge is imposed on emissions from specific facilities in the petroleum and natural gas sector that surpass an annual emission threshold of 25,000 metric tons of carbon dioxide equivalent greenhouse gases. *Id.* § 136(c)–(d), at 2074. The charge for applicable facilities is set at \$900 per ton for the year 2024, \$1,200 per ton for 2025, and \$1,500 per ton thereafter. *Id.* § 136(e).

³¹ BIDEN’S METHANE ACTION PLAN, *supra* note 13, at 1.

³² For example, CAFOs have been largely exempted from federal air pollution regulation. See, e.g., *CERCLA and EPCRA Reporting Requirement for Air Releases of Hazardous Substances from Animal Waste at Farms*, ENV’T PROT. AGENCY, <https://www.epa.gov/epcra/cercla-and-epcra-reporting-requirements-air-releases-hazardous-substances-animal-waste-farms> (Mar. 4, 2024) (explaining that “emissions from animal waste at farms” are exempt under CERCLA and EPCRA). For a detailed discussion of the regulatory gaps and loopholes that animal agriculture enjoys under U.S. federal environmental law, see Abate, *supra* note 11, at 245–49.

III. BACKGROUND ON BIOGAS AND METHANE DIGESTERS

Despite being promoted as a sustainable improvement to existing manure management practices at CAFOs, biogas and methane digester facilities have been criticized for their expense, reliance on government subsidies, and limited potential to replace natural gas.³³ These measures represent the animal agriculture industry's effort to perpetuate its harmful status quo and protect its bottom line. These "technological fix" solutions³⁴ also seek to make the public feel good about the industry's efforts by distracting from the root cause of CAFO methane emissions. Portrayed as methods to promote clean energy and neutralize these facilities' impacts, these measures represent the essence of greenwashing.

A. Biogas

According to industry sources, biogas³⁵ is a "renewable fuel ... produced when organic matter, such as food or animal waste, is broken down by microorganisms in the absence of oxygen."³⁶ This process is known as anaerobic digestion.³⁷ As a prerequisite for anaerobic digestion to occur, the waste material must be in an oxygen-free environment.³⁸ Biogas can occur naturally or as part of an industrial process designed to produce it as a fuel.³⁹ Biogas proponents assert that capturing the gases and using them as an energy source causes less harm to the environment than allowing them to escape into the atmosphere.⁴⁰

³³ See Keough, *supra* note 1 (explaining that methane digesters are expensive to build and maintain, reliant on government subsidies, and would lead to overall higher emissions levels).

³⁴ See Emma Bryce, *A Novel and Relatively Simple Device Filters Most of the Methane out of Animal Barns*, ANTHROPOCENE (Jan. 5, 2024), <https://www.anthropocenemagazine.org/2024/01/a-novel-device-can-filter-most-of-the-methane-out-of-animal-barns-and-help-farming-clean-up-its-act> (describing a new technology—separate from biogas and methane digesters—that seeks to limit methane emissions from animal agriculture facilities and recycle the waste into a form that can be reintegrated into the system).

³⁵ "Biogas" is similar to but distinct from "biomethane." *What is Biogas and Biomethane?*, GAS DATA, <https://www.gasdata.co.uk/2022/08/08/what-is-biogas-biomethane> (last visited Mar. 5, 2024). Biogas is comprised of a range of gases, including methane and carbon dioxide; meanwhile, biomethane is produced when biogas undergoes a purification process that removes carbon dioxide, hydrogen sulfide, and water. *Id.*

³⁶ *What is Biogas?* NATIONAL GRID, <https://www.nationalgrid.com/stories/energy-explained/what-is-biogas> (Feb. 23, 2023); SARA TANIGAWA, ENV'T & ENERGY STUDY INST., FACT SHEET: BIOGAS: CONVERTING WASTE TO ENERGY 1 (Jessie Stolark ed., 2017), https://www.eesi.org/files/FactSheet_Biogas_2017.09.pdf (describing the process through which bacteria break down plant and animal products to produce biogas).

³⁷ TANIGAWA, *supra* note 36, at 1 (offering a diagram of the anaerobic digestion process); *What is Biogas?*, *supra* note 36 (describing the biogas production process).

³⁸ *What is Biogas?*, *supra* note 36.

³⁹ *Id.*

⁴⁰ *Id.*

Biogas is largely composed of methane and carbon dioxide.⁴¹ When compressed, biogas can function as fuel for vehicles.⁴² Additionally, if converted into biomethane, it can then be used for cooking and heating as a substitute for natural gas.⁴³

Biogas plants capture methane to use as fuel, thereby reducing methane emissions.⁴⁴ The use of biogas generation also helps reduce reliance on oil and coal.⁴⁵ In addition, the raw materials used in the production of biogas are renewable.⁴⁶ Materials such as manure, food waste, and crop residue are never in short supply, so biogas produced from these raw materials is a highly sustainable option.⁴⁷ Moreover, the process of generating biogas results in a by-product called “enriched organic digestate.”⁴⁸ This substance can be added to, or even replace, chemical fertilizers—enriched organic digestate can promote plant growth and increase resilience to diseases, while commercial fertilizers contain toxic chemicals that can cause food poisoning and other adverse effects.⁴⁹

As a result of these asserted benefits, biogas has been bolstered by federal and state subsidies and tax credits. At the federal level, the IRA’s Investment Tax Credit (ITC) has been instrumental in encouraging biogas production.⁵⁰ The ITC offers a tax credit for a percentage of the capital investment in qualifying renewable energy projects, including biogas facilities.⁵¹ Additional provisions within the IRA are poised to support projects related to biogas by facilitating financing options or increasing demand. Such initiatives include an allocation of \$2 billion towards the United States Department of Agriculture’s Rural Energy for America Program (REAP), aimed at fostering rural or agricultural renewable energy ventures, as well as increases in annual credits per gallon for the sale of specific biofuels.⁵² In addition to the IRA, the Biden

⁴¹ *Id.*

⁴² *Id.*

⁴³ *Id.*

⁴⁴ *Advantages and Disadvantages of Biogas*, HOMEBIOGAS (Feb. 21, 2021), <https://www.homebiogas.com/blog/advantages-and-disadvantages-of-biogas>.

⁴⁵ *Id.*; see also TANIGAWA, *supra* note 36, at 2 (“Using stored biogas limits the amount of methane released into the atmosphere and reduces dependence on fossil fuels.”).

⁴⁶ TANIGAWA, *supra* note 36, at 1 (describing how biogas is produced from organic waste).

⁴⁷ *Advantages and Disadvantages of Biogas*, *supra* note 44.

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ Inflation Reduction Act of 2022, Pub. L. No. 117–169, § 13102(f), 136 Stat. 1818, 1913–1916 (2022) (codified at 26 U.S.C. § 48) (adding biogas to ITC’s energy credit scheme).

⁵¹ *Business Energy Investment Tax Credit (ITC)*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, <https://programs.dsireusa.org/system/program/detail/658> (Aug. 29, 2023).

⁵² Michael H. Levin, *The IRA Revolutionizes AD Tax Credits*, BIOCYCLE (Aug. 23, 2022), <https://www.biocycle.net/the-ira-revolutionizes-ad-tax-credits>; *Rural Energy for America Program Renewable Energy Systems & Energy Efficiency Improvement Guaranteed Loans & Grants in Iowa*, U.S. DEP’T OF AGRIC., <https://www.rd.usda.gov/programs-services/energy-programs/rural-energy-america-program-renewable-energy-systems-energy-efficiency-improvement-guaranteed-loans-3> (last visited Aug. 15, 2024) (explaining that REAP offers

Administration has prioritized biogas as a cornerstone of its clean energy agenda, as reflected in the Methane Action Plan, which aims to establish public-private collaborations to promote the expansion of biogas facilities.⁵³

State-level subsidies and incentives also play a crucial role in supporting biogas projects. About seventy programs offered across thirty-one states provide financial incentives for anaerobic digesters.⁵⁴ For example, California's Dairy Digester Research and Development Program provides grants to dairy farmers to help offset the costs of installing dairy digesters, which capture methane emissions from dairy waste and convert them into biogas.⁵⁵ Furthermore, some states have implemented Renewable Portfolio Standards (RPS) that require a certain percentage of energy to be derived from renewable sources, including biogas, thereby creating a market for biogas producers. For example, under the Massachusetts RPS program, a certain percentage of Class I renewable energy must be derived from certain biomass technologies, including biogas, which creates a market for biogas producers by incentivizing the development and utilization of biogas as a renewable energy source.⁵⁶

Additionally, various state-level tax incentives, such as production tax credits, property tax exemptions, and sales tax exemptions, further encourage investment in biogas projects.⁵⁷ These incentives vary by state and are often designed to attract investment and stimulate economic growth within the renewable energy sector. For instance, Oregon's Commercial Energy Tax Credit provided a tax credit for a percentage of eligible project costs related to the construction, installation, and operation of biogas facilities.⁵⁸ Such tax credits help offset the initial

financing options for "agricultural producers and rural small businesses for renewable energy systems," including biodiesel and ethanol).

⁵³ BIDEN'S METHANE ACTION PLAN, *supra* note 13, at 1, 12.

⁵⁴ FOOD & WATER WATCH, THE BIG OIL AND BIG AG PONZI SCHEME: FACTORY FARM BIOGAS 4 (2024), <https://www.foodandwaterwatch.org/2024/01/09/the-big-oil-and-big-ag-ponzi-scheme-factory-farm-biogas>.

⁵⁵ *Dairy Digester Research & Development Program*, CAL. DEP'T OF FOOD & AGRIC., <https://www.cdfa.ca.gov/oefi/ddrdp> (last visited Aug. 16, 2024).

⁵⁶ *Program Summaries*, COMMONWEALTH OF MASS., <https://www.mass.gov/info-details/program-summaries> (last visited Aug. 16, 2024) (explaining that the required percentage of RPS Class I technologies, which include biomass fuel, "increases by one percent annually with no established end date"). In addition to an RPS, Massachusetts has an Alternative Energy Portfolio Standard (APS), requiring the state's electric load to be met by a certain percentage of eligible "alternative energy systems," including biogas. *Alternative Energy Portfolio Standard (APS) & Renewable Thermal (RT) Technologies*, MASS. CLEAN ENERGY CTR., <https://www.masscec.com/alternative-energy-portfolio-standard-aps-renewable-thermal-rt-technologies> (last visited Aug. 15, 2024) (explaining that the APS provides incentive "for Massachusetts businesses, institutions, and governments" to install "alternative energy systems," including "biogas systems").

⁵⁷ *Renewable Energy Explained: Incentives*, U.S. ENERGY INFO. ADMIN., <https://www.eia.gov/energyexplained/renewable-sources/incentives.php> (Dec. 30, 2022).

⁵⁸ OR. REV. STAT. § 315.331 (establishing a now sunset program that provided a tax credit of up to 35% of project costs).

capital investment required for developing biogas projects, making them more economically viable for investors and developers.⁵⁹

Notwithstanding these purported benefits that the industry alleges, biogas has been criticized from a variety of perspectives.⁶⁰ Concern for the environment is a major reason why the use of biogas has become more widespread.⁶¹ Yet when environmental concerns motivate industry practices, allegations of greenwashing are sure to follow. The fossil fuel industry and industrial animal agriculture are in business to make profits. Good environmental stewardship is secondary, especially if it requires sacrifices that adversely affect the company's bottom line.⁶²

Biogas is marketed as a renewable energy solution to solve the methane impacts of CAFOs.⁶³ However, these efforts by agribusinesses and the energy industry to promote biogas as "renewable" are dangerously misleading.⁶⁴ As biogas burns, it "releases carbon dioxide and other pollutants, including smog-forming nitrogen oxides, ammonia, and hydrogen sulfide."⁶⁵ Consequently, biogas from factory farms actually *hurts* the climate more than it helps.⁶⁶ Not only will it not solve the industry's waste problem, it will entrench that problem by encouraging more factory farms.⁶⁷ At best, biogas projects may be helpful to small farms, but only if the biogas is reused onsite.⁶⁸

One encouraging sign for opponents of biogas facilities is that a major company that planned to support these facilities is having misgivings

⁵⁹ AgSTAR: *Project Planning and Financing*, U.S. ENV'T PROT. AGENCY, <https://www.epa.gov/agstar/project-planning-and-financing> (June 30, 2023) (explaining that "availability of incentives and financing rates" are important factors in determining "[t]he feasibility of an anaerobic digester project").

⁶⁰ See, e.g., Mariann Sullivan, *Animal Law Podcast #104: The Biogas Nightmare*, OUR HEN HOUSE (Jan. 31, 2024), <https://www.ourhenhouse.org/alp104> (criticizing biogas as a scam to hide factory farming's environmental harms); Press Release, Animal Legal Def. Fund, Joaquin Phoenix Responds to Industrial Animal Agriculture's Greenwashing of Factory Farm 'Biogas' (Aug. 10, 2022), <https://aldf.org/article/joaquin-phoenix-responds-to-industrial-animal-agricultures-greenwashing-of-factory-farm-biogas> (discussing Animal Legal Defense Fund's project with Joaquin Phoenix that criticizes industrial animal agriculture's deceptive portrayal of biogas in marketing efforts).

⁶¹ *What is Biogas?*, *supra* note 36.

⁶² But see Kelsey Miller, *The Triple Bottom Line: What It Is & Why It's Important*, HARV. BUS. SCH. ONLINE: BUSINESS INSIGHTS (Dec. 8, 2020), <https://online.hbs.edu/blog/post/what-is-the-triple-bottom-line> (advocating for businesses to adopt the triple bottom line, where "people" and "planet" are placed on the same level as "profits").

⁶³ Phoebe Gittelsohn et al., *The False Promises of Biogas: Why Biogas Is an Environmental Justice Issue*, 15 ENV'T JUST. 352, 355 (2022).

⁶⁴ Wenonah Hauter, *Agribusiness Is Trying to Greenwash Its Waste as "Renewable Energy"*, SENTIENT MEDIA (Oct. 7, 2020), <https://sentientmedia.org/agribusiness-is-trying-to-greenwash-its-waste-as-renewable-energy>.

⁶⁵ *Id.*

⁶⁶ Mia DiFelice & Kat Ruane, *We Can't Let this Gas Greenwash Factory Farms*, FOOD & WATER WATCH (Apr. 12, 2023), <https://www.foodandwaterwatch.org/2023/04/12/we-cant-let-this-gas-greenwash-polluting-factory-farms> (explaining that the factory farm gas supply chain in fact leaks more methane into the air than its fossil fuel counterpart).

⁶⁷ *Id.*

⁶⁸ Gittelsohn et al., *supra* note 63, at 361.

about its involvement.⁶⁹ Shell had acquired a Danish company for almost two billion dollars to conduct these operations, yet it has withdrawn from its first project in Minnesota.⁷⁰ This development reveals that “biogas still faces hurdles—including high costs, regulations, market forces and local opposition—to becoming a major U.S. energy source.”⁷¹ Additionally, biogas poses significant safety hazards due to its flammability, toxicity, and potential to explode.⁷² Residents near these facilities are also concerned about waste leakage during transport, processing, and storage.⁷³

B. Methane Digesters

Also known as manure or anaerobic digesters, methane digesters are devices that promote the conversion of manure into “simple organics” and biogas.⁷⁴ According to the Environmental Protection Agency (EPA), methane digesters on livestock farms have many benefits compared to traditional manure management systems including diversified farm revenue, rural economic growth, conservation of agricultural land, energy independence, sustainable food production, and farm-community relationships.⁷⁵ For instance, methane digester systems provide farmers with “tipping fees” for processing organic waste originating offsite.⁷⁶ These fees provide extra revenue, and the additional input of organic waste means more biogas becomes available for energy production.⁷⁷

Unlike biogas facilities, which have gained traction only in recent years, methane digesters are not a new phenomenon.⁷⁸ Methane digesters have seen use for decades, mainly on small farms, with some facilities

⁶⁹ Kirsti Marohn, *Digesters Make Renewable Energy from Manure, but Face Hurdles*, MINN. PUB. RADIO NEWS (Sept. 12, 2023, 4:00 AM), <https://www.mprnews.org/story/2023/09/12/digesters-make-renewable-energy-from-manure-but-face-hurdles> (explaining that Nature Energy, a subsidiary of Shell, decided to “strategically” suspend operations in August 2023).

⁷⁰ *Shell Closes \$2bn Acquisition of Danish Firm Nature Energy Biogas*, OFFSHORE TECH. (Feb. 21, 2023) <https://www.offshore-technology.com/news/shell-closes-nature-energy/>; Marohn, *supra* note 69.

⁷¹ Marohn, *supra* note 69.

⁷² Gittelsohn et al., *supra* note 63, at 355.

⁷³ *Id.* at 353, 355. Environmental justice impacts are receiving increased attention but are beyond the scope of this article. *See generally id.* at 353 (explaining that CAFOs have significant negative impacts on nearby residents, and that “CAFOs are disproportionately located in communities of color . . . or low income communities”).

⁷⁴ *Methane (Anaerobic) Digesters*, U. NEB.-LINCOLN INST. AGRIC. & NAT. RES., <https://water.unl.edu/article/animal-manure-management/methane-anaerobic-digesters> (last visited Mar. 4, 2024).

⁷⁵ *AgSTAR: The Benefits of Anaerobic Digestion*, U.S. ENV'T PROT. AGENCY, <https://www.epa.gov/agstar/benefits-anaerobic-digestion> (last visited Mar. 4, 2024).

⁷⁶ *Id.*

⁷⁷ *Id.*

⁷⁸ Marohn, *supra* note 69.

using methane to produce electricity since 1999.⁷⁹ Like biogas facilities, however, methane digesters incentivize farmers to have more animals and therefore produce more manure.⁸⁰ More manure prompts the need for more digesters, thus creating a vicious cycle and perpetuating industrial animal agriculture's harmful status quo.⁸¹ Methane digesters also do not reduce the emissions of methane from cows' belches, which contribute significantly to methane emissions from these facilities.⁸²

Although methane digesters may be able to produce natural gas from manure, critics like Food and Water Watch argue that the benefits do not outweigh the risks.⁸³ Transporting biomethane is expensive and complicated for livestock farmers, and accidents can lead to leakages and even explosions.⁸⁴ Other environmental groups accuse large-scale methane digesters of greenwashing and warn that the technology will "encourage the expansion of large factory farms that have negative impacts on air and water quality."⁸⁵

The Biden Administration's Methane Action Plan incentivizes this practice.⁸⁶ The Plan intends to provide various government subsidies and grants for the use of methane digesters on large-scale livestock operations.⁸⁷ These include conservation programs like the Environmental Quality Incentives Program (EQIP), the AgStar Program,

⁷⁹ *Id.*

⁸⁰ Keough, *supra* note 1.

⁸¹ *Smithfield's Deceptive Sustainability Claims Slammed in FTC Complaint*, FOOD & WATER WATCH (Feb. 4, 2021), <https://www.foodandwaterwatch.org/2021/02/04/smithfields-deceptive-sustainability-claims-slammed-in-ftc-complaint> (explaining that the largest pork producer in the U.S. is leveraging its use of methane digesters to make misleading claims regarding its "devastating" business model instead of taking measures to minimize its environmental impact, further entrenching "some of the most dangerous factory farm practices").

⁸² Jenny Splitter, *America Has a Manure Problem and the Miracle Solution Being Touted Isn't All that It Seems*, GUARDIAN (Jan. 20, 2022, 6:00 AM), <https://www.theguardian.com/us-news/2022/jan/20/manure-natural-gas-pipeline-factory-farms-greenwashing>.

⁸³ *Id.*; see also Press Release, Friends of the Earth, Community Members, State and National Groups Rally at EPA to Oppose its Support for Factory Farm Gas (June 26, 2024), <https://foe.org/news/petition-epa-factory-farm-gas> (describing rally opposing EPA's support of manure biogas, at which over 33,000 Friends of the Earth members signed a petition opposing this practice).

⁸⁴ Splitter, *supra* note 82.

⁸⁵ Marohn, *supra* note 69; see also FRIENDS OF THE EARTH, MAKING A BAD SITUATION WORSE: MANURE DIGESTERS AT MEGA DAIRIES IN WISCONSIN 5 (2024), https://foe.org/wp-content/uploads/2024/06/WI-Case-Study_v2.pdf (noting that Kewaunee County, Wisconsin is "experiencing an uptick in manure biogas production" in that "28% (5/18) of the CAFOs [in the county] now use anaerobic digesters to produce factory farm gas, including one of the largest CAFOs in Wisconsin").

⁸⁶ Keough, *supra* note 1 (noting the Biden Methane Action Plan incentivizes "manure-to-energy projects" through government subsidies and grants for large facility operations); see also BIDEN'S METHANE ACTION PLAN, *supra* note 13, at 11–12 (describing programs incentivizing reducing methane emissions from livestock).

⁸⁷ Keough, *supra* note 1.

the Rural Business Cooperative Service, and the REAP.⁸⁸ Additionally, the IRA allows companies that invest in anaerobic digesters to claim a tax credit.⁸⁹

Subsidies and grants form only one piece of the Methane Action Plan, though—when he was elected, President Biden vowed to use “all available tools” to address methane in the atmosphere.⁹⁰ At COP26, he encouraged other nations to join a global pledge to reduce methane emissions 30% by 2030.⁹¹ Additionally, the EPA proposed rules to control methane emissions from oil and gas sources, as well as other rules relating to methane leaks and pipeline safety standards.⁹²

On March 8, 2024, EPA issued the final methane rule.⁹³ There are several key components of the final rule. First, both new and existing sources will be regulated.⁹⁴ Additionally, the rule reinstates methane rules for the upstream oil and natural gas sector, reversing the rollback implemented by the Trump Administration.⁹⁵ Moreover, the rule will phase out and eventually prohibit routine flaring at new oil wells.⁹⁶ The rule also requires owners and operators to increase monitoring for unintended methane emission leaks.⁹⁷ Owners and operators may use advanced remote monitoring technologies, such as aerial surveys, if such technologies meet certain specifications.⁹⁸ Lastly, the rule includes a super-emitter program that will address large methane emission events.⁹⁹ Unfortunately, like the IRA’s methane regulation provisions, this new rule does not extend to CAFOs.

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ Jean Chemnick, *US Targets Methane Emissions in New Batch of Rules*, SCI. AM. (Nov. 22, 2023), <https://www.scientificamerican.com/article/u-s-targets-methane-emissions-in-new-batch-of-rules>.

⁹¹ Drew Shindell, *Biden Announces a Sweeping Methane Plan—Here’s Why Cutting the Greenhouse Gas is Crucial for Protecting Climate and Health*, CONVERSATION (Sept. 17, 2021, 11:55 AM), <https://theconversation.com/biden-announces-a-sweeping-methane-plan-heres-why-cutting-the-greenhouse-gas-is-crucial-for-protecting-climate-and-health-168220>.

⁹² *See id.* (noting the Biden Administration’s plan to propose new rules).

⁹³ Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review, 89 Fed. Reg. 16820 (to be codified at 40 C.F.R. pt. 60).

⁹⁴ *Id.* at 16828.

⁹⁵ CARRIE JENKS ET AL., EPA’S FINAL METHANE RULE—INCORPORATING ADVANCED TECHNOLOGIES AND EMISSIONS DATA TO REDUCE METHANE EMISSIONS FROM THE OIL AND NATURAL GAS SECTOR 1 (2023), <https://eelp.law.harvard.edu/wp-content/uploads/EELP-EPA-Final-Methane-Rule.pdf>. Commentators were able to review and analyze an unofficial version of the final rule released by the EPA in conjunction with COP28 in 2023. *See id.* (describing the “final” rule announced at COP28).

⁹⁶ Timothy J. Sullivan et al., *EPA Finalizes Air Rule Targeting Oil and Gas Industry Methane Emissions*, BEVERIDGE & DIAMOND PC: PUBL’NS (Dec. 14, 2023), <https://www.bdlaw.com/publications/epa-finalizes-air-rule-targeting-oil-and-gas-industry-methane-emissions>.

⁹⁷ 89 Fed. Reg. at 16871, 16875.

⁹⁸ *Id.* at 16873.

⁹⁹ *Id.* at 16876–77.

IV. GREENWASHING DÉJÀ VU: PARALLELS WITH FOSSIL FUEL INDUSTRY GREENWASHING

Animal agriculture's efforts to promote biogas and methane digesters as sustainable measures to promote renewable energy are strikingly similar to tactics from the fossil fuel industry's greenwashing playbook. Like biogas, blue hydrogen has been widely promoted as a sustainable alternative to fossil fuels when in fact it enables the industry to continue to rely on carbon-intensive impacts. Like methane digesters, carbon capture and storage (CCS) conveys the message that as long as efforts are made to process or bury the waste or emissions from these harmful practices, industry may proceed with business as usual in a way that is environmentally beneficial while maintaining profits. A pattern of public deception by seeking to promote self-serving objectives is evident in these greenwashing tactics across both industries.

A. Blue Hydrogen

Produced from fossil gas paired with carbon capture and storage, blue hydrogen does not involve much of a pivot away from the fossil fuel industry's status quo. Contrary to the industry's campaign to promote blue hydrogen as a potent weapon to fulfill climate mitigation goals,¹⁰⁰ a 2021 Cornell University study found that blue hydrogen has a considerably larger greenhouse gas footprint than burning natural gas, coal, or diesel oil for heating.¹⁰¹ The fossil fuel industry also uses hydrogen as a justification for building more pipelines, claiming this infrastructure can eventually support "clean hydrogen."¹⁰² Yet hydrogen is highly flammable and corrosive, and safely repurposing oil and gas infrastructure for hydrogen would involve substantial costs.¹⁰³ Though not a greenhouse gas itself, hydrogen can also exacerbate the impacts of greenhouse gases by, for instance, extending the lifespan of methane in the atmosphere.¹⁰⁴ Moreover, hydrogen requires more energy to produce, store, and transport than it provides when converted into useful energy; therefore, the use of blue hydrogen will rely on fossil fuels¹⁰⁵ and help to entrench the industry's status quo.

Worse still, companies can claim their hydrogen projects are renewable when in reality their life cycle emissions are poor. A proposed hydrogen production tax credit (PTC), established under section 45V of

¹⁰⁰ See Fergus Smith et al., *COP26: Hydrogen in the Spotlight*, WHITE & CASE LLP: OUR THINKING (Dec. 1, 2021), <https://www.whitecase.com/insight-alert/cop26-hydrogen-spotlight> (discussing the role of scaling up transition fuels in the energy transition, including blue hydrogen).

¹⁰¹ Lakhani, *supra* note 9. For the full report, see Robert W. Howarth & Mark Z. Jacobson, *How Green is Blue Hydrogen?*, 9 ENERGY SCI. & ENG'G 1676 (2021).

¹⁰² Lakhani, *supra* note 9.

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

the IRA, is one of only three “direct pay” provisions in the bill available for corporations.¹⁰⁶ The tax credit would authorize payments for blue hydrogen as a form of “clean” hydrogen,¹⁰⁷ which represents a significant victory for the fossil fuel industry. The latest research indicates that accurately accounting for both methane leakage and the power demands of CCS makes blue hydrogen even worse for the climate than coal, per unit of heat energy.¹⁰⁸

“Book-and-claim” carbon accounting is one way that blue hydrogen is being used as a greenwashing tactic.¹⁰⁹ This is a market mechanism that allows the environmental attributes of a product, such as renewable energy, to be traded between consumers with no direct, physical connection to the original product.¹¹⁰ It enables alleged “on paper” reductions measured through Renewable Energy Certificates (RECs) for emitters to claim that pollution in one place is being offset by renewable power in another.¹¹¹ Tradable emissions systems like these tend to intensify pollution hot spots that concentrate harm in already overburdened communities.¹¹²

Companies like Shell and Valero are advocating for book-and-claim credits for biogas captured from CAFOs,¹¹³ which benefit from an essentially nonexistent air emissions regulatory environment, allowing methane biogas producers to ignore leakage during production and transportation while collecting clean energy subsidies.¹¹⁴ This loophole

¹⁰⁶ Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election To Treat Clean Hydrogen Production Facilities as Energy Property, 88 Fed. Reg. 89220 (Dec. 26, 2023) (to be codified at 26 CFR pt. 1); SARAH LUTZ, FRIENDS OF THE EARTH, HYDROGEN HYPE: PAY NO ATTENTION TO THE POLLUTER BEHIND THE CURTAIN 1 (2023), https://foe.org/wp-content/uploads/2023/02/Hydrogen-Polluter-Wishlist_FINAL.pdf.

¹⁰⁷ Jeff St. John, *Tax-Credit Rules Leave Key “Blue Hydrogen” Issues Unanswered*, CANARY MEDIA (Jan. 12, 2024) [hereinafter St. John, *Tax Credit*], <https://www.canarymedia.com/articles/hydrogen/tax-credit-rules-leave-key-blue-hydrogen-issues-unanswered>.

¹⁰⁸ Jim Walsh & Mia DiFelice, *How Much of This Hype for Hydrogen “Energy” is Just Smoke and Mirrors?*, FOOD & WATER WATCH (Dec. 13, 2022), <https://www.foodandwaterwatch.org/2022/12/13/hydrogen-energy-hype>.

¹⁰⁹ See St. John, *Tax Credit*, *supra* note 107 (describing how “book and claim” accounting can “allow hydrogen producers to sign contracts with [renewable natural gas] production in another part of the country to offset the fossil gas they’re using to make hydrogen”).

¹¹⁰ Thomas Koch Blank et al., *Clean Energy 101: Book and Claim*, RMI (May 30, 2023), <https://rmi.org/clean-energy-101-book-and-claim>.

¹¹¹ Jessica Shankleman, *Google Targets 100 Percent Renewable Energy for Its Data*, BLOOMBERG (Sept. 14, 2020), <https://www.bloomberg.com/news/articles/2020-09-14/google-ramps-up-clean-energy-ambition-as-californian-fires-rage> (describing renewable energy certificates).

¹¹² Sara Gersen, *Billions in Hydrogen Tax Credits Could Be Given to Polluters*, THE HILL (June 1, 2023, 12:30 PM), <https://thehill.com/opinion/energy-environment/4027700-billions-in-hydrogen-tax-credits-could-be-given-to-polluters>.

¹¹³ Jeff St. John, *The Biomethane Boondoggle That Could Derail Clean Hydrogen*, CANARY MEDIA (Sept. 11, 2023), <https://www.canarymedia.com/articles/hydrogen/the-biomethane-boondoggle-that-could-derail-clean-hydrogen>.

¹¹⁴ Madison McVan, *18 Years and Counting: EPA Still Has No Method for Measuring CAFO Air Pollution*, MO. INDEP. (Apr. 21, 2023, 6:45 AM), <https://missouriindependent.com>

has caused significant emission leakage that is not reported or captured in modeling.¹¹⁵ The real impact of subsidizing biogas has been a market distortion that effectively penalizes more sustainable practices such as pasturing livestock that could reduce emissions and pollution at the source.¹¹⁶ CAFOs mirror fossil gas companies' lucrative greenwashing tactics by rebranding methane biogas as renewable natural gas.¹¹⁷

B. Carbon Capture and Storage

Like plastic surgery designed to extend youthful vitality in the human body, the primary goal of CCS is to extend the life of fossil fuels. As noted by Earthjustice, “[s]ubsidizing carbon capture for uneconomic coal and gas-fired power plants enables them to continue operating—and polluting” even as more ambitious climate targets are established.¹¹⁸

CCS projects are troublesome for several reasons. First, CCS entrenches the harmful status quo. These projects require a large amount of energy, typically from fossil fuels, thereby increasing the source's total carbon footprint.¹¹⁹ Most of the captured carbon is then used for enhanced oil recovery, which negates much of the purported climate benefits of CCS and promotes reliance on “dirty fuels.”¹²⁰ A second concern is the effectiveness of the CCS process. The International Energy Agency determined that in order to achieve net zero emissions by 2050, annual carbon capture capacity needs to reach 1.6 billion tons of carbon dioxide by 2030, which is unrealistic to achieve climate mitigation targets.¹²¹ In addition, “[c]lose to 90% of proposed CCS capacity in the power sector has failed at implementation stage or was suspended early,” and “most projects have failed to operate at their theoretically designed capturing rates.”¹²² Consequently, the 90% emissions reduction target generally claimed by the industry has failed to materialize.¹²³ Further challenges stem from finding suitable storage sites and maintaining effective

/2023/04/21/18-years-and-counting-epa-still-has-no-method-for-measuring-cafo-air-pollution.

¹¹⁵ Friends of the Earth et al., Comment Letter on Proposed Renewable Fuel Standards for 2023–2025 and Other Changes (Feb. 10, 2023), <https://www.regulations.gov/comment/EPA-HQ-OAR-2021-0427-0632>.

¹¹⁶ *Id.*

¹¹⁷ See Guy Oron, *Climate Activists Warn “Renewable Natural Gas” May Be the Newest Form of Greenwashing*, REAL CHANGE (Mar. 1, 2023), <https://www.realchangenews.org/news/2023/03/01/climate-activists-warn-renewable-natural-gas-may-be-newest-form-greenwashing> (reporting on a garbage disposal company rebranding biogas as “renewable natural gas” to make the company appear more environmentally friendly).

¹¹⁸ *Carbon Capture*, EARTHJUSTICE, *supra*, note 10.

¹¹⁹ *Id.*

¹²⁰ *Id.*

¹²¹ Bruce Robertson, *Carbon Capture Remains a Risky Investment for Achieving Decarbonisation*, INST. FOR ENERGY ECON. & FIN. ANALYSIS (Sept. 2, 2022), <https://ieefa.org/resources/carbon-capture-remains-risky-investment-achieving-decarbonisation>.

¹²² *Id.*

¹²³ *Id.*

storage.¹²⁴ Once trapped underground, the carbon dioxide requires centuries-long monitoring to ensure it does not escape back into the atmosphere.¹²⁵ Finally, while failing to adequately capture carbon emissions, CCS also does nothing to reduce other harmful pollutants from power plants.¹²⁶

CCS also poses cost and environmental justice concerns. CCS is expensive, and taxpayers foot the bill thanks to federal subsidies for CCS projects.¹²⁷ Earthjustice contends that “[s]ubsidizing CCS diverts resources away from real climate solutions like clean energy and electrification, and blocks progress towards environmental justice.”¹²⁸ Also, toxic releases and waste products from CCS projects threaten the health and safety of nearby communities.¹²⁹ Lastly, because the decision-making process for CCS projects often excludes local communities, the projects proceed without transparency or public input.¹³⁰

The underperformance of CCS in achieving its asserted benefits has provided fertile ground for accusations of greenwashing. The bases for these claims are threefold. First, CCS advocates overstate the effectiveness of transplanting CCS from the natural gas processing context, where most CCS has occurred, to fossil fuel power plants.¹³¹ The few CCS projects in this new context have performed poorly, and have been beset with technological problems and outages.¹³² Second, the industry overstates the anticipated performance of these facilities in claiming that 90% of emissions can be captured.¹³³ These kinds of capture rates—even if they were enough—have never yet been demonstrated at scale and under real-world conditions.¹³⁴ The Boundary Dam Power Station in Canada, the world’s only operating CCS facility at a coal-fired power plant, has performed at only 50% of its carbon capture capacity over the course of its lifetime.¹³⁵ Even in its best year, the facility only captured around 80% of its capacity of one million tons of carbon.¹³⁶ Finally, CCS proponents ignore unknown consequences of large-scale geological storage of carbon dioxide, which could include ocean

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ *Carbon Capture*, EARTHJUSTICE, *supra*, note 10.

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ Robertson, *supra* note 121.

¹³² *Id.*; Karin Rives, *Only Still-Operating Carbon Capture Project Battled Technical Issues in 2021*, S&P GLOBAL (Jan. 6, 2022), <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/only-still-operating-carbon-capture-project-battled-technical-issues-in-2021-68302671>.

¹³³ See Robertson, *supra* note 121 (“The 90% emission reduction target generally claimed by the industry has been unreachable in practice.”).

¹³⁴ *Id.*

¹³⁵ Rives, *supra* note 132; Robertson, *supra* note 121.

¹³⁶ Rives, *supra* note 132.

acidification, harm to marine biodiversity, and carbon dioxide leaking back to the atmosphere.¹³⁷

The U.S. Department of Energy has provided tens of billions of dollars to wasteful and ineffective “clean coal” and CCS projects, almost all of which have failed.¹³⁸ These expenditures have even been condemned by the Government Accountability Office.¹³⁹ Worse still, carbon capture projects can receive a tax credit equivalent to \$60 per ton for carbon used in enhanced oil recovery, thereby prolonging the life of the fossil fuel industry.¹⁴⁰ Applied narrowly, CCS could prove useful for concentrated emissions from industrial sources like cement, steel, and fertilizers.¹⁴¹ Yet even these limited applications can succeed only if researchers, investors, and project managers overcome CCS technology’s technical and financial limitations.¹⁴²

V. PROPOSED ACCOUNTABILITY MECHANISMS

The greenwashing tactics of the animal agriculture and fossil fuel industries are much more egregious and sinister than mere puffery and overstated claims of alleged benefits. The common denominator in the biogas, methane digester, blue hydrogen, and carbon sequestration contexts is that these strategies deliberately fail to address the root cause of the problems at issue. They are analogous to aspiring musicians who purchase expensive instruments while refusing to practice. These strategies also fail to deliver reliable results in combating climate change while involving high associated economic, environmental, and social costs. Worse still, these measures are communicated with messaging that seeks to dupe the public into thinking a “win-win” reality of continued profits while achieving climate mitigation compliance goals and a clean energy transition is underway.¹⁴³ Quite the opposite is true. These tactics

¹³⁷ LINDSAY FENDT ET AL., CTR. FOR INT’L ENV’T L., *DEEP TROUBLE: THE RISKS OF OFFSHORE CARBON CAPTURE AND STORAGE* 21–22 (Lani Furbank & Maria Frausto eds., 2023), <https://www.ciel.org/wp-content/uploads/2023/11/Deep-Trouble-The-Risks-of-Offshore-Carbon-Capture-and-Storage.pdf>.

¹³⁸ Jonathan Foley, *Don’t Fall for Big Oil’s Carbon Capture Deceptions*, SCI. AM. (Dec. 4, 2023), <https://www.scientificamerican.com/article/dont-fall-for-big-oils-carbon-capture-deceptions>.

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² *Id.* Carbon offsets are receiving increased attention as a potential form of greenwashing. Two examples of how carbon offset claims can constitute greenwashing are when the credits are “double counted” (i.e., when a trade reduction is counted by the company offsetting its emissions *and* by the project’s host country when reporting its progress in meeting climate targets) and when there is no “additionality” (i.e., when a party receives carbon credits for conserving forests that were never in danger of being cut down). Khalid Raji, *Is Carbon Offset a Form of Greenwashing?*, EARTH.ORG (Aug. 5, 2023), <https://earth.org/is-carbon-offset-a-form-of-greenwashing>.

¹⁴³ See discussion *infra* Part IV. Greenwashing Déjà vu: Parallels with Fossil Fuel Industry Greenwashing.

merely direct the conscientious public's interest in a transition away from traditional fossil fuel and industrial animal agriculture practices while these industries perpetuate the harmful status quo through greenwashing practices.

The “green moral hazard”¹⁴⁴ dimension of the problem is even more disturbing. The term “moral hazard” refers to the notion that those who are insured are likely to engage in riskier behavior because they feel protected.¹⁴⁵ A similar phenomenon is at play with these technological “quick-fix” greenwashing tactics. These measures risk increasing demand for the harmful status quo practices of these industries and thereby increase methane emissions because these practices bear the “renewable energy” halo.

Detecting greenwashing tactics and holding industry accountable for these efforts can be difficult. It requires consumers to ask whether the representations of industry actors are the truth. Some valuable inquiries include: (1) is the claim substantiated by third-party verifications or standards, and does it include the full scope of the activity in question; (2) how are the claims measured; and (3) who is accountable for the results?¹⁴⁶ If answers to these questions are not readily available, consumers should suspect that greenwashing may be afoot.¹⁴⁷

This Part proposes long-term and short-term accountability mechanisms to address the greenwashing tactics that industrial animal agriculture employs in its deceptive use of biogas and methane digesters as allegedly meaningful measures to address the methane impacts of CAFOs. Effective long-term measures would involve implementing disclosure and verification standards much like those that are starting to be implemented in the fossil fuel industry context in the European Union (EU). These legislative efforts take time, however, and have not yet been fully implemented in the United States. In the meantime, an effective short-term response would be to pursue strategic litigation to raise awareness of and apply pressure to phase out these harmful activities by drawing on best practices from greenwashing lawsuits in the fossil fuel context.

¹⁴⁴ See Gernot Wagner & Daniel Zizzamia, *Green Moral Hazards*, 25 ETHICS, POL'Y & ENV'T 264, 265 (2022) (noting that similar concerns have been expressed regarding climate geoengineering tactics that arguably provide a false sense of security that “quick fix” solutions are available to address climate change, which could reduce public motivation to reduce climate change drivers through traditional emissions reduction measures).

¹⁴⁵ *What is 'Moral Hazard'*, ECON. TIMES, <https://economictimes.indiatimes.com/definition/moral-hazard> (last visited Mar. 3, 2024) (defining moral hazard as “a situation in which one party gets involved in a risky event knowing that it is protected against the risk and the other party will incur the cost”).

¹⁴⁶ Irina Gerry, *Paint It Green: Meat & Dairy's Top Greenwashing Tactics, Exposed*, GREEN QUEEN (Jan. 29, 2023), <https://www.greenqueen.com.hk/meat-dairy-greenwashing-tactics>.

¹⁴⁷ *Id.*

A. Long Term: Implement Disclosure and Verification Standards

The EU is a leader in the fight against greenwashing.¹⁴⁸ In the United States, there are also some promising developments underway at the federal level that show progress in combating greenwashing. At the state level, as is the case in many contexts in environmental governance, California is a leader in enacting legislation that seeks to identify and limit greenwashing tactics. Some combination of these approaches imposing disclosure and verification standards to combat the fossil fuel industry's greenwashing tactics should be applied to regulate the greenwashing at issue with biogas and methane digesters.

In the fossil fuel industry context, many greenwashing tactics have been exposed and targeted in litigation.¹⁴⁹ For example, environmental activists in the Netherlands sued KLM Royal Dutch Airlines for its "Fly Responsibly" advertisements, which claimed the company's carbon offsets and alternative fuels would make air travel "sustainable."¹⁵⁰ The plaintiffs accused KLM of violating EU consumer law by misleading the public about the company's contribution to climate change.¹⁵¹ On March 20, 2024, in *Fossielvrij v. KLM*,¹⁵² the District Court of Amsterdam held that KLM's advertising misled the public in 15 of the 19 environmental statements at issue, including the company's claims about the benefits of offsetting a flight and its characterization of its policy on the use of sustainable aviation fuel.¹⁵³

¹⁴⁸ Despite the EU's leadership in combating greenwashing through legislation, advocates in the EU are seeking even tighter regulation. See Iulia Gheorghiu, *EU's Financial Regulator: Stronger Regulation Needed to Deter Greenwashing*, ESG DIVE (Jan. 3, 2024), <https://www.esgdive.com/news/esma-stronger-regulation-needed-to-deter-greenwashing/703492>.

¹⁴⁹ Renee Cho, *Climate Lawsuits Are on the Rise. This Is What They're Based on.*, COLUM. CLIMATE SCH.: STATE OF THE PLANET (Aug. 9, 2023), <https://news.climate.columbia.edu/2023/08/09/climate-lawsuits-are-on-the-rise-this-is-what-theyre-based-on>.

¹⁵⁰ *Id.*

¹⁵¹ Press Release, ClientEarth, Landmark Greenwashing Lawsuit Against KLM Airline Granted Court Permission (June 7, 2023), <https://www.clientearth.org/latest/press-office/press/landmark-greenwashing-lawsuit-against-klm-airline-granted-court-permission>.

¹⁵² Rb.'s-Amsterdam 20 maart 2024, JOR 2024, 156 m.nt. M.J. Bosselaar (Stichting ter bevordering van de Fossielvrij-beweging/Koninklijke Luchtvaart Maatschappij N.V.).

¹⁵³ Ajit Naranjan, *Dutch Airline KLM Misled Customers with Vague Green Claims, Court Rules*, GUARDIAN (Mar. 20, 2024), <https://www.theguardian.com/world/2024/mar/20/dutch-airline-klm-misled-customers-green-claims-court-rules>. On the coattails of this landmark ruling from the Netherlands in the fossil fuel context, a court in Denmark reached a similar conclusion less than one month later in a greenwashing case in the industrial animal agriculture context. Euronews Green, *'Climate-Controlled Pig'? Danish Crown Admits to Misleading People with Greenwashing Pork Claims*, EURONEWS (Apr. 16, 2024), <https://www.euronews.com/green/2024/04/16/climate-controlled-pig-danish-crown-admits-to-misleading-people-with-greenwashing-pork-cla>. The Western High Court concluded that Danish Crown, Europe's largest meat processing company, unlawfully misled consumers by using stickers on its packaging asserting that its pigs were "climate controlled." *Id.* The company also agreed to remove the statement "Danish pig is more climate-friendly than you think" from its packages. *Id.*

Concerns in the EU regarding carbon offsets as a widespread greenwashing tactic prompted lawmakers in the EU to enact legislation banning some of those efforts and restricting others unless the claims are accompanied by evidence.¹⁵⁴ Terms such as “climate neutral” or “climate positive,” which rely on offsetting, will be prohibited in the EU by 2026.¹⁵⁵ Additionally, products and services portrayed as “biodegradable” or “eco” must provide proof, with carbon offsetting schemes banned as evidence.¹⁵⁶ Other terms such as “environmentally friendly,” “natural,” and “climate neutral” are similarly prohibited without evidence.¹⁵⁷ The new directive allows only sustainability labels using approved certification schemes.¹⁵⁸

While carbon offsets hardly offer a direct comparison to the biogas and methane digester context, the regulatory approach to combating greenwashing tactics is readily applicable. For example, like the EU’s approach of banning or limiting the use of characterizations of environmentally friendly performance without proof, restricting the definition of what constitutes “renewable energy” could offer a pathway for protection in the biogas and methane digester context. Biogas stretches the concept of “renewable” by requiring unnatural and massive amounts of manure to generate this so-called “renewable energy” source.¹⁵⁹ In reality, the factory farm model of production is unnecessary¹⁶⁰ and should be phased out, which would be far better for the environment than relying on this form of “renewable” energy, which imposes massive environmental, public health, and social negative externalities.¹⁶¹

Additional support for a regulatory approach can be found in the European Securities and Markets Authority (ESMA) Progress Report on Greenwashing, which reviews preliminary remediation actions and provides recommendations for enhanced regulation of greenwashing risks and the supervision of sustainable finance policies.¹⁶² The report addresses the need to clarify what qualifies as “sustainable

¹⁵⁴ Patrick Greenfield, *EU Bans ‘Misleading’ Environmental Claims that Rely on Offsetting*, GUARDIAN (Jan. 17, 2024), <https://www.theguardian.com/environment/2024/jan/17/eu-bans-misleading-environmental-claims-that-rely-on-offsetting>.

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

¹⁵⁹ See Marohn, *supra* note 69 (describing methane digesters as “renewable” and describing the inputs).

¹⁶⁰ EMILY M. MILLER, FAM. FARM ACTION ALL., THE TRUTH ABOUT INDUSTRIAL AGRICULTURE: A FRAGILE SYSTEM PROPPED UP BY MYTHS AND HIDDEN COSTS 21–22 (Angela Huffman et al. eds., 2021), <https://farmaction.us/wp-content/uploads/2021/07/Truth-Report.pdf>.

¹⁶¹ See Gittelsohn et al., *supra* note 63, at 353 (describing the environmental harms and environmental justice issues which stem from biogas systems).

¹⁶² EUR. SEC. & MKTS. AUTH., PROGRESS REPORT ON GREENWASHING 8 (2023), https://www.esma.europa.eu/sites/default/files/2023-06/ESMA30-1668416927-2498_Progress_Report_ESMA_response_to_COM_RfI_on_greenwashing_risks.pdf.

investment.”¹⁶³ The existing definition in the Sustainable Finance Disclosures Regulation (SFDR) embraces “a high level of flexibility and absence of shared, predefined metrics and threshold for an investment’s contribution to a sustainable objective,” which compares poorly against the definition of “environmentally sustainable activities” in the EU Taxonomy Regulation (TR), which uses “science-based and clear Technical Screening Criteria (TSC).”¹⁶⁴

The Report also addresses the need to establish reliable, comprehensive sustainability data. In the realm of sustainability commitments and pledges, the Report recommends “external validation or assessment of the ambition and credibility of these pledges” to combat greenwashing “in relation to forward-looking information.”¹⁶⁵ Additionally, Environmental, Social, and Governance (ESG) data providers should publicly disclose their methodologies, consistent with the International Organization of Securities Commission (IOSCO) standards, and regulators should establish minimum standards for the quality of estimates of ESG data.¹⁶⁶ The Report suggests distinguishing “between claims that promise or strongly suggest that a certain outcome will be achieved or guaranteed versus claims that commit to a certain process being applied (obligation of results vs. obligation of means).”¹⁶⁷

Again, although greenwashing in the sustainable finance context is seemingly unrelated to similar tactics in animal agriculture’s use and promotion of biogas and methane digesters, key mechanisms are common in regulating greenwashing in each context. Science-based criteria to determine what “renewable” and “natural” mean in the biogas and methane digester context would help limit these practices, as would external certification entities authorized to evaluate the credibility of their self-serving assertions. Finally, requiring transparency and disclosure of the industry’s methodologies to support their assertions of favorable outcomes also would limit the extent to which the empty promise of biogas would be able to persist.

In the United States, the Federal Trade Commission is reviewing its “Green Guides” for the first time in more than a decade.¹⁶⁸ The updated version is expected in 2024.¹⁶⁹ The FTC’s Guides for the Use of Environmental Marketing Claims, also called the Green Guides, provide advice to companies on how to avoid making deceptive environmental

¹⁶³ *Id.* at 25, 60.

¹⁶⁴ *Id.* at 60.

¹⁶⁵ *Id.* at 65.

¹⁶⁶ *Id.* at 66.

¹⁶⁷ *Id.*

¹⁶⁸ See Guides for Use of Environmental Marketing Claims, 87 Fed. Reg. 77766 (proposed Dec. 20, 2022) (proposing revisions to the “Green Guides,” most recently revised in 2012); see also Guides for the Use of Environmental Marketing Claims, 77 Fed. Reg. 62122 (Oct. 11, 2012) (codified at 16 C.F.R. pt. 260) (adopting revised “Green Guides” in 2012).

¹⁶⁹ Laura Brett, *It’s Not Easy Being Green: Preparing for the FTC’s Updated Green Guides*, ADWEEK (Oct. 19, 2023), <https://www.adweek.com/commerce/green-advertising-ftc-2024-guide>.

claims in advertising or marketing.¹⁷⁰ Since 2018, the FTC has used the Green Guides to support enforcement actions only eight times.¹⁷¹ As the agency prepares to revise the Green Guides, environmental advocates have encouraged the FTC to crack down on greenwashing and apply the Green Guides more ambitiously than it has in the past.¹⁷² The revised guidelines will likely contain more specific guidance for environmental marketing claims and lead to increased enforcement and industry compliance.¹⁷³ The Green Guides are limited, however, because they do not address all greenwashing tactics and do not extend to claims that a company itself is environmentally friendly.¹⁷⁴ Nevertheless, the increased attention to greenwashing concerns at the federal level can help apply pressure to limit the greenwashing tactics at issue in the animal agriculture industry.

California has enacted two new climate disclosure laws that require companies doing business in the state to disclose their carbon emissions and climate impact.¹⁷⁵ The first, the Climate Corporate Data Accountability Act (CCDAA),¹⁷⁶ requires businesses with annual revenues in excess of \$1 billion to annually disclose their Scope 1, 2 and 3 GHG emissions for the prior fiscal year in conformance with the Greenhouse Gas Protocol standards and guidance.¹⁷⁷ The law requires companies to estimate and report “Scope 3” emissions for the first time.¹⁷⁸

The second law, the Climate-Related Financial Risk Act (CRFRA),¹⁷⁹ requires entities with annual revenues exceeding \$500 million to prepare a biannual climate-related financial risk report that discloses (1) the entity’s “climate-related financial risk” and (2) measures adopted to mitigate and adapt to that climate-related financial risk.¹⁸⁰ “Climate-related financial risk” includes all material risk of harm to immediate and long-term financial outcomes due to physical and transitional risks, such as risks to operations, provision of goods and services, supply chains,

¹⁷⁰ Tom Kertscher, *Red Light on ‘Greenwashing’? US Regulatory Agency Takes Fresh Look at Deceptive Climate Claims*, POLITIFACT (July 17, 2023), <https://www.politifact.com/article/2023/jul/17/red-light-on-greenwashing-us-regulatory-agency-tak>.

¹⁷¹ *Id.*

¹⁷² *Id.*

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ Thomas A Donaho, *New Regulations and Standards Look to Clean Up the Voluntary Carbon Market and Fight Greenwashing*, BAKERHOSTETTLER (Oct. 17, 2023), <https://www.bakerlaw.com/insights/new-regulations-and-standards-look-to-clean-up-the-voluntary-carbon-market-and-fight-greenwashing>.

¹⁷⁶ Cal. Health & Safety Code § 38532 (2024).

¹⁷⁷ *Id.* § 38532(c). Under the CCDAA, Scope 1 emissions are “direct” greenhouse gas emissions from a source controlled by the reporting entity; Scope 2 emissions are “indirect” emissions from electricity consumption and heating; and Scope 3 emissions are “indirect” upstream or downstream emissions other than Scope 2 emissions. *Id.* § 38532(b)(3)–(5).

¹⁷⁸ Donaho, *supra* note 175. “Scope 3” emissions include emissions from the company’s “full value chain,” including emissions from entities that a reporting company does not own or directly control (e.g., customers who buy or use company products). *Id.*

¹⁷⁹ CAL. HEALTH & SAFETY CODE § 38533 (2024).

¹⁸⁰ *Id.* § 38533(b)(1).

employee health and safety, capital and financial investments, institutional investments, financial standing of loan recipients and borrowers, shareholder value, consumer demand, and financial markets and economic health.¹⁸¹

The requirements of these California statutes resemble the climate disclosure rules proposed by the Securities Exchange Commission (SEC) with some notable exceptions that underscore the ambitious scope of the California laws: (1) the SEC's proposed rule would cover only publicly traded companies, whereas the CCDA applies to both public and private companies;¹⁸² (2) the SEC's proposed rule would only require a disclosure of Scope 3 emissions when "material" or if the registrant has set a GHG emissions target that includes Scope 3 emissions.¹⁸³

Taken together, recent legislative developments in the EU and United States reflect a growing trend toward mandating transparency, disclosure, and accountability in an effort to combat greenwashing in the climate change compliance context. These efforts are highly relevant in seeking to demand similar compliance in the animal agriculture context and finally overcome the "exceptionalism" from vigorous environmental compliance that this industry has enjoyed for decades.¹⁸⁴ Restrictions on industry's false claims about what protects the environment should apply across all sectors of the business world without exception to ensure an opportunity for enhanced compliance with climate mitigation goals.

B. Best Practices in Strategic Litigation

Greenwashing litigation has exploded in recent years. While the cases have involved several contexts and a variety of legal theories,¹⁸⁵ the cases that are most relevant to the animal agriculture context involve those filed against the fossil fuel industry or other private sector entities alleging that their products or services falsely claim, or make exaggerated characterizations, that their products or services perform in a certain

¹⁸¹ *Id.* § 38533(a)(2).

¹⁸² The Enhancement and Standardization of Climate-Related Disclosures for Investors, 87 Fed. Reg. 21334, 21335 (proposed Apr. 11, 2022); CAL. HEALTH & SAFETY CODE § 38532(b)(2) (2024); Donaho, *supra* note 175.

¹⁸³ 87 Fed. Reg. at 21345.

¹⁸⁴ See Bradley R. Finney, *Agricultural Law Stifles Innovation and Competition*, 72 ALA. L. REV. 785, 808–809 (2021) (discussing agricultural exceptionalism and how agriculture has received exceptions from standard environmental laws).

¹⁸⁵ See Jillian Marullo et al., *Amid the Rise of Greenwashing Litigation, Guidance Due for Updates May Become Law*, PILLSBURY (Feb. 21, 2023), <https://www.pillsburylaw.com/en/news-and-insights/greenwashing-litigation.html> (surveying recent greenwashing cases and anticipating potential regulatory changes that could lead to additional greenwashing litigation); Jacob H. Hupart et al., *Greenwashing Class Action Litigation: An Emerging Risk for Companies' Claims of Sustainability*, MINTZ (Aug. 2, 2023), <https://www.mintz.com/insights-center/viewpoints/2151/2023-08-02-greenwashing-class-action-litigation-emerging-risk> (drawing from recent caselaw to offer companies recommendations for avoiding potential greenwashing liability).

manner in connection with being sustainable, renewable, recyclable, carbon neutral, or the like.

Greenwashing cases associated with various “sustainable” or “humane” products offer valuable insights into the defining features of successful greenwashing claims. Just as biogas is touted as a “renewable energy source” despite raising environmental, public health, and animal welfare concerns, these purportedly “sustainable” practices in other contexts involve the manipulation of environmental factors to falsely portray a facade of sustainability while concealing the true impact of business activities. Thus, applying similar reasoning to biogas lawsuits may increase the chances of achieving favorable legal outcomes.

Courts have not universally accepted third-party verification as conclusive evidence of sustainability claims.¹⁸⁶ For example, in *Smith v. Keurig Green Mountain, Inc. (Keurig)*,¹⁸⁷ Keurig argued that labeling the company’s single-use coffee-brewing pods—“K-Cups”—as “recyclable” aligned with the FTC’s Green Guides because the material used to make the pods was technically recyclable.¹⁸⁸ However, the reality was that most recycling facilities were unable to process materials as small as K-cups, which contradicted the Green Guides’ stipulation that items made from recyclable material but not accepted in recycling programs should not be marketed as recyclable.¹⁸⁹ Accordingly, the court approved a \$10 million settlement in part because the plaintiff’s allegations were “not precluded based on the Green Guides’ plain text.”¹⁹⁰

Similarly, claims that biogas is a renewable energy source, despite potentially exacerbating traditional factory farming practices and methane emissions, may not withstand scrutiny if they fail to align with the true environmental impact of the practice, as outlined by regulatory guidelines. Moreover, the outcome in the *Keurig* case seems to suggest

¹⁸⁶ See *Dorris v. Danone Waters of Am.*, 711 F.Supp.3d 179, 190–192 (S.D.N.Y. 2024) (finding that consumer pled plausible claim that “carbon neutral” was misleading because, despite defendant’s argument that “carbon neutral” complies with the Green Guides as a “specific environmental benefit . . . supported by a third-party certification,” the term “carbon neutral” is not within an average consumer’s knowledge and it carries multiple meanings); see also *Lee v. Can. Goose U.S., Inc.*, No. 20 Civ. 9809, 2021 WL 2665955, at *2, *5 (S.D.N.Y. June 29, 2021) (denying motion to dismiss even where defendant’s representations of “sustainable” fur sourcing on product labels were compliant with Canadian and U.S. standards); *Usler v. Vital Farms, Inc.*, No. A-21-CV-447, 2022 WL 1491091, at *3 (W.D. Tex. Jan. 31, 2022), *adopted*, 2022 WL 5154068 (W.D. Tex. Mar. 2, 2022) (recommending denial of defendant’s motion to dismiss where egg products were labeled “pasture raised” according to Human Farm Animal Care standards because the industry definition of “pasture raised” is different from the plain meaning of the term for reasonable consumers).

¹⁸⁷ 393 F.Supp.3d 837 (N.D. Cal. 2019).

¹⁸⁸ *Id.* at 842, 845; see also Amended Class Action Complaint at 1 n.1, *Keurig*, 393 F.Supp.3d 837 (No. 18-cv-06690) (noting that Keurig’s single-serve coffee pods are sold under the name “K-Cup”).

¹⁸⁹ Amended Class Action Complaint at 1, *Keurig*, 393 F.Supp.3d 837 (No. 18-cv-06690); *Keurig*, 393 F.Supp.3d at 842, 846.

¹⁹⁰ *Smith v. Keurig Green Mountain, Inc.*, No. 18-cv-06690, 2023 WL 2250264, at *6, *12 (N.D. Cal. Feb. 27, 2023) (approving the settlement); *Keurig*, 393 F.Supp.3d at 846.

that industry has a type of extended producer responsibility (EPR).¹⁹¹ Given the gravity of the climate crisis, the plastics and animal agriculture industries may be held to a higher standard in characterizing what is “recyclable” and in determining what processes can be understood as producing “renewable” energy.

Courts have denied motions to dismiss where the supposed advantages of the defendant’s “sustainable” practices actually produce adverse outcomes.¹⁹² For example, in *Keurig*, the court denied the defendant’s motion to dismiss because products labeled “recyclable” could not be processed by most recycling facilities.¹⁹³ Similarly, in *White v. Kroger Co.*,¹⁹⁴ the court held that Kroger plausibly misled consumers by labeling products as “reef friendly” because the ingredients used in the products allegedly had the potential to damage reefs.¹⁹⁵ These cases demonstrate that sustainability claims, including those pertaining to biogas as a renewable energy source, may come under legal scrutiny if they lead to *unintended adverse outcomes*, such as heightened methane emissions from conventional factory farming methods.

Nevertheless, courts have determined that environmental assertions are not deceptive when companies are open and offer public evidence. In *Dwyer v. Allbirds, Inc.*,¹⁹⁶ for example, the plaintiff contended that the defendant misled reasonable consumers by presenting its products as “sustainable” and “environmentally friendly.”¹⁹⁷ The plaintiff argued that the defendant’s carbon footprint calculation and life cycle analysis methodology were insufficient measures of product sustainability.¹⁹⁸ The court rejected this claim and granted the defendant’s motion to dismiss because the company precisely delineated the components of its carbon footprint calculations, provided comprehensive details about its life cycle analysis methodology, and explained its reliance on the Higg Material

¹⁹¹ *What is Extended Producer Responsibility*, AM. FOREST & PAPER ASS’N (Apr. 11, 2023), <https://www.afandpa.org/news/2023/what-extended-producer-responsibility> (describing extended producer responsibility (EPR) as “the concept where brand owners, producers and material manufacturers pay for the end-of-life costs to recycle or dispose of products they put on the market.”).

¹⁹² See *Can. Goose U.S., Inc.*, 2021 WL 2665955, at *7 (finding that defendant’s representations of “sustainable” fur sourcing on product labels created a sufficient issue of material misrepresentation because the term signals compliance with “higher animal welfare standards,” but in fact the fur was obtained from trappers who allegedly use inhumane traps); see also *Usler*, 2022 WL 1491091, at *1, *4–5 (recommending denial of defendant’s motion to dismiss where egg products were labeled as “humane” but defendant partially sourced hens from inhumane hatcheries); *Rawson v. ALDI, Inc.*, No. 21-cv-2811, 2022 WL 1556395, at *1, *3–4 (N.D. Ill. May 17, 2022) (denying in part defendant’s motion to dismiss where salmon products were labeled “sustainable” because the label “attempts to connect its product to at least some environmental benefit,” but in reality defendant sourced its salmon from industrial fish farms that use environmentally destructive practices).

¹⁹³ *Keurig*, 393 F.Supp.3d at 842, 846, 850.

¹⁹⁴ No. 21-cv-08004, 2022 WL 888657 (N.D. Cal. Mar. 25, 2022).

¹⁹⁵ *Id.* at *1–2.

¹⁹⁶ 598 F.Supp.3d 137 (S.D.N.Y. 2022).

¹⁹⁷ *Id.* at 144–45.

¹⁹⁸ *Id.* at 145–46.

Sustainability Index for evaluating the environmental impact of its materials.¹⁹⁹

In the context of biogas, allegations of environmental misrepresentation might not always succeed, even if the defendant has made inaccurate statements or incomplete calculations, provided that the defendant has furnished sufficient public evidence to support its assertions. This understanding is consistent with applying the disclosure and verification standards enacted in the EU to biogas and methane digesters as an effective measure to eliminate or limit the industry's greenwashing tactics.

VI. CONCLUSION

The climate change impacts of CAFOs' methane emissions are well established in the scientific community, yet the legal community has been slow to regulate these damaging impacts effectively. Despite some recent efforts to regulate methane emissions as the "low-hanging fruit" of climate regulation, the animal agriculture sector has largely avoided these regulatory mandates and pressures. There are two reasons for this reality. The first is the supportive relationship that animal agriculture enjoys with the U.S. government and the lax regulations to which it is subject.²⁰⁰ Second, CAFOs have engaged in greenwashing tactics that seek to dupe the public into embracing its biogas and methane digester measures as reducing CAFOs' methane emissions and generating renewable energy in the process.²⁰¹

This Article reveals how these misleading and inadequate responses in the industrial animal agriculture context parallel the fossil fuel industry's greenwashing campaigns with blue hydrogen and CCS. In both contexts, the greenwashing tactics seek to entrench the status quo of profits at the expense of the environment, public health, and vulnerable communities. Worse still, these measures risk increasing demand for these destructive GHG-intensive processes that need to be phased out to enable progress on the path toward a clean and renewable energy future.

This Article also proposes both long-term and short-term accountability mechanisms to combat the greenwashing at issue with biogas and methane digesters. Effective long-term measures would include disclosure and verification standards much like those that are starting to be implemented in the fossil fuel industry context in the EU, U.S., and California.²⁰² These legislative efforts take time, however, and have not yet been fully implemented in the United States. In the

¹⁹⁹ *Id.* at 149–151. The Higg Material Sustainability Index was developed by the Sustainable Apparel Coalition and measures the carbon emissions of apparel materials. *Id.* at 145, 151.

²⁰⁰ See *supra* notes 11–14, 32 and accompanying text.

²⁰¹ See *supra* notes 64–85 and accompanying text.

²⁰² See discussion *infra* Part V.A. Long Term: Implement Disclosure and Verification Standards.

meantime, an effective short-term response would be to pursue strategic litigation to raise awareness of and impose pressure to phase out these harmful activities by drawing on best practices from greenwashing lawsuits in the fossil fuel and sustainability contexts. U.S. case law pertaining to misleading statements regarding sustainability and environmental performance appears to offer a foundation for accountability for misleading characterizations regarding the performance of biogas and methane digesters.