

May 25, 2021

RE: Implementation of the Renewable Fuel Standard e-RINs for wood biomass, landfill gas, and factory farm gas

Dear Administrator Regan:

We write to you as organizations committed to climate and Environmental Justice, and as communities on the frontlines of factory farming, power plants, landfills, and wood pellet manufacturing. We are deeply concerned that the EPA could soon qualify electricity from burning biomass and so-called biogas from factory farms and landfills as a source of “renewable fuel” for electric vehicles. This would be harmful to both communities and the climate.

You began your tenure at the EPA publicly committing to Environmental Justice and promising to redress the legacy of environmental harm to low-income and Black, Indigenous, Latino, and other communities of color. Utilizing the cellulosic mandate of the Renewable Fuel Standard as a backdoor giveaway for dirty energy is inconsistent with this commitment.

Impacted frontline communities already bear the disproportionate brunt of harm from the processing and burning of woody biomass, factory farm gas, and landfill gas. Allowing these practices to earn compliance credits under the Renewable Fuel Standard will exacerbate harm and cumulative impacts in these communities, regardless of whether the profits from these credits flow to utilities, charging stations, car companies, or individual drivers.

For over a decade the Renewable Fuel Standard has failed to reduce emissions that contribute to climate change while driving air and water pollution through industrial farming practices. The EPA should not make a bad problem worse by pretending that dirty electricity is renewable fuel:

## **Biomass**

Burning woody biomass to produce electricity is incompatible with efforts to reduce greenhouse emissions and create a just transition towards clean energy. At the smokestack, woody biomass is one of the dirtiest sources of energy. Burning wood feedstocks produces more carbon and toxic pollutants than even coal. Many biomass plants burn whole trees, tires, and treated lumber such as creosote railroad ties, resulting in highly toxic air emissions. The nitrogen oxides, volatile organic compounds, heavy metals, and particulate matter released by burning biomass are ozone and PM2.5 precursors<sup>1</sup> which inflict disparate harm on Black, Indigenous, Latino, and other communities of color by creating higher risks of asthma, heart attacks, and stroke.<sup>2</sup>

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<sup>1</sup> Jonathan J Buonocore, Parichehr Salimifard, Drew R Michanowicz, and Joseph G Allen, “A decade of the U.S. energy mix transitioning away from coal: historical reconstruction of the reductions in the public health burden of energy,” *16 Environmental Research Letters* (2021). <https://iopscience.iop.org/article/10.1088/1748-9326/abe74c>

<sup>2</sup> Partnership for Policy Integrity <https://www.pfpi.net/wp-content/uploads/2014/04/PFPI-Biomass-is-the-New-Coal-April-2-2014.pdf>

The so-called 'carbon neutrality' ascribed to biomass ignores the immediacy of the climate crisis. Instantaneously releasing tons of carbon through combustion, with the vague promise that forest regrowth will eventually re-sequester these emissions is not a climate solution.

Despite industry claims that they operate 'sustainably' by only burning logging byproducts and forest residues, in order to operate at scale, biomass power plants burn whole trees - further undermining U.S. emission abatement through the loss of natural carbon sequestration provided by our forests. It can take over a century for forests to regrow and absorb the same amount of carbon that is instantly released through burning woody biomass.

Even when the biomass is not burned domestically, as is often the case with wood pellet production, the impacts on local communities are devastating. The wood pellet supply chain requires clear cutting hardwood forests and produces tons of particulate matter, nitrogen oxides, carbon monoxide, and volatile organic compounds.<sup>3</sup> The toxic pollutants, and resulting negative health outcomes, from both the milling and incineration of woody biomass are disproportionality borne by communities of color.

### **Factory Farm Gas**

The production and combustion of factory farm gas creates environmental injustices at every stage of the process. Factory farm gas entrenches the polluting factory farm system, and its massive climate impact, with a false solution to methane emissions that, in reality, is just another source of dirty energy.<sup>4</sup> The liquefied manure management system commonly used by industrial hog and dairy operations creates football field-sized lagoons of manure, which contain high concentrations of nitrogen, phosphorus, pathogens, and heavy metals. The run-off from land-applied waste creates toxic wastewater that runs into nearby rivers, lakes, and streams. The risk of contaminating surrounding water and soil increases when factory farm gas producers cover unlined lagoons to increase the amount of methane they capture. The process makes the nitrogen more water soluble and increases the risk of contaminants seeping into groundwater. Many of the communities where factory farm gas facilities are sited, or will be targeted if the industry is given another perverse incentive, are particularly vulnerable to this water pollution due to their reliance on well water and surrounding surface water.

Air pollution and noxious odors created by factory farms have severe implications for surrounding communities.<sup>5</sup> These operations produce harmful concentrations of ammonia, hydrogen sulfide, and volatile organic compounds. Surrounding communities experience higher cases and severity of respiratory illnesses, as well as nausea, headaches, and other health conditions. The ammonia and hydrogen sulfide emissions from industrial animal facilities have been linked with higher rates

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<sup>3</sup> Environmental Integrity Project <https://www.sec.gov/rules/petitions/2019/ptn4-741-exc.pdf>

<sup>4</sup> Petition to List Industrial Dairy and Hog Operations as Source Categories Under Section 111(b)(1)(A) of the Clean Air Act <https://food.publicjustice.net/wp-content/uploads/sites/3/2021/04/2021.04.06-Industrial-Dairy-and-Hog-CAA-111-Petition-FINAL.pdf>

<sup>5</sup> See *McKiver v. Murphy Brown, LLC*, 980 F.3d 937, 977-985 (4th Cir. 2020) ("It is past time to acknowledge the full harms that the unreformed practices of hog farming are inflicting.") Wilkinson, J. concurring

of infant mortality and surrounding communities suffer from decreased life expectancy.<sup>6</sup> Volatile organic compounds, nitrogen oxides, and ammonia act as ozone and PM2.5 precursors, which inflict significant harm in polluted air basins like the San Joaquin Valley in California where factory farm dairy operations are the largest source of VOC and ammonia. Factory farm gas does nothing to limit these emissions, and quite the opposite, serves as an incentive for larger operations to generate more manure for more factory farm gas.

While the harms of factory farm gas production are well-established, the supposed climate benefits are dubious. Liquefying manure and the resulting methane pollution comes from a production decision to maximize herd sizes and manure generation in the industrial model of corporate-controlled agriculture. As many states have no air monitoring requirements for factory farm gas operations, methane leakage from digesters can rapidly diminish any potential climate benefits. This leakage increases with directed factory farm gas facilities and clustered factory farm gas facilities for pipeline injection, which require an environmentally devastating network of pipelines. The leakage from these pipelines increases air pollution, and the associated health detriments, on already overburdened frontline communities. Much of the proposed expansion in the southeast of the US would cross fragile ecosystems, such as wetlands in North Carolina, that provide important flooding protection and clean water to nearby communities.<sup>7</sup>

In addition to the devastating impacts of producing and transporting factory farm gas, burning it to produce electricity creates even more pollution. For instance, combusting factory farm gas on-site for electricity at 25 facilities would emit more nitrogen oxides, sulfur oxides, and VOC than a modern gas-fired plant, while producing less than five percent of the electricity.<sup>8</sup> This fuel is thus not the “clean” alternative that the factory farmer industry claims it to be. The transition away from our fossil fuel dependence should not include even dirtier sources, like burning factory farm gas.

## Landfill Gas

Similarly to factory farm gas, landfill gas as a source of energy worsens greenhouse gas emissions. Deep underground in large landfills, organic discards, such as food scraps, grass clippings, leaves, and paper that should have been recycled, decompose anaerobically, generating billions of pounds of methane. The IPCC found that as much as 80 percent of the methane generated at landfills escapes into the atmosphere.<sup>9</sup> Attempts to offset these emissions by recovering its energy value fails, because when landfills are operated to minimize the release of pollutants into the environment, the energy value in that gas is too low to be utilized. The very

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<sup>6</sup> Julia Kravchenko, Sung Han Rhew, Igor Akushevich, Pankaj Agarwal, and H Kim Lyerly, “Mortality and Health Outcomes in North Carolina Communities Located in Close Proximity to Hog Concentrated Animal Feeding Operations”, 79 *North Carolina Medical Journal* 278 (2018).

<https://www.ncmedicaljournal.com/content/ncm/79/5/278.full.pdf>

<sup>7</sup> NC Conservation Network <https://www.ncconservationnetwork.org/wp-content/uploads/2021/03/biogaspositionpaperNC33021.pdf>

<sup>8</sup> San Joaquin Valley Unified Air Pollution Control District permitting documents allow for this comparison of emissions after the imposition of pollution control requirements, available at [http://www.valleyair.org/notices/Docs/2016/03-22-16\\_\(S-1143770\)/S-1143770.pdf](http://www.valleyair.org/notices/Docs/2016/03-22-16_(S-1143770)/S-1143770.pdf); [https://valleyair.org/notices/Docs/2010/12-17-10%20\(C-1100751\)/Public%20Notice%20Package.pdf](https://valleyair.org/notices/Docs/2010/12-17-10%20(C-1100751)/Public%20Notice%20Package.pdf). Even if the factory farm gas was combusted at a power plant rather than on-site, the community near the plant would suffer PM2.5 and nitrogen dioxide pollution.

<sup>9</sup> IPCC Fourth Assessment Report: Climate Change 2007 [https://archive.ipcc.ch/publications\\_and\\_data/ar4/wg3/en/ch10s10-4-2.html](https://archive.ipcc.ch/publications_and_data/ar4/wg3/en/ch10s10-4-2.html)

change needed to boost its energy value – reckless practices such as leaving the site uncovered for years in order to let in the extra moisture that methane-producing bugs need to flourish – results in so much more methane escaping that it vastly overwhelms the carbon dioxide in the fossil fuels that is displaced.<sup>10</sup>

The collection and monetization of landfill gas creates many of the same Environmental Justice concerns as factory farm gas. Landfills are disproportionately sited in communities of color and expose these communities to a wide variety of toxic and cancerous byproducts. The EPA's unwillingness to enforce hazardous air pollutants emissions controls on landfills through the Clean Air Act has led to communities in the airshed of over 1,000 municipal solid waste landfills being coerced to breathe dangerous and unlawful volumes of ethyl benzene, toluene, and benzene.<sup>11</sup> Leachate from landfills can carry nitrate, phosphate, ammonium, and oxides into surrounding groundwater. Odor, dust, noise, windblown litter, vermin, and insects plague nearby communities and keep property values low.<sup>12</sup>

Supporting electricity from landfill gas through the Renewable Fuel Standard would encourage the expansion of landfill gas to energy projects. This would undermine local efforts to minimize organic waste in landfills, which is the only effective means to reduce landfills' disproportionate impact on global warming. This artificially created demand, combined with the inherent inability of landfill facilities to adequately collect methane, would be a step backwards in both emissions and Environmental Justice.

## **Conclusion**

Allowing electricity from biomass, factory farm gas, or landfill gas to qualify for credits under the Renewable Fuel Standard will encourage further expansion of these harmful industries. We need a Just Transition for workers and communities on the frontlines of our fossil fuel economy and a phaseout of fossil fuels--including in the transportation sector. However, a new future for electric vehicles must not come at the expense of vulnerable communities already overburdened with pollution.

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<sup>10</sup> Sierra Club <https://www.sierraclub.org/sites/www.sierraclub.org/files/landfill-gas-report.pdf>

<sup>11</sup> EPA <https://www.epa.gov/stationary-sources-air-pollution/municipal-solid-waste-landfills-new-source-performance-standards>

<sup>12</sup> Maheshi Danthurebandara, Stevan Passel, Dirk Nelen, Yves Tielemans, and Karel Van Acke, "Environmental and Socio-economic Impacts of Landfills", Linnaeus ECO-TECH (2013).  
[https://www.researchgate.net/publication/278738702\\_Environmental\\_and\\_socio-economic\\_impacts\\_of\\_landfills](https://www.researchgate.net/publication/278738702_Environmental_and_socio-economic_impacts_of_landfills)

ActionAid USA  
Animal Legal Defense Fund  
Beyond Extreme Energy  
Biofuelwatch  
Brighter Green  
Buckeye Environmental Network  
Buffalo River Watershed Alliance  
Businesses for a Livable Climate  
CA Businesses for a Livable Climate  
Call to Action Colorado  
CatholicNetwork US

Center for Biological Diversity  
Center for Food Safety  
Chatham Research Group  
Clean Air Carolina  
Clean Energy Action - Colorado  
Climate Hawks Vote  
CO Businesses for a Livable Climate  
Colorado Farm and Food Alliance  
Colorado Small Business Coalition

Community Action Works  
Community Roots  
Concerned Citizens of Maxton  
Dogwood Alliance  
Down East Coal Ash Environmental and Social  
Justice Coalition  
Earth Action, Inc.  
Earth Ethics, Inc.  
Eastern NC Coalition on Clean and Green  
Industry

EcoRobeson  
Elders Climate Action  
Empower our Future - Colorado  
Environmental Justice Network  
Family Farm Action  
Farmworker Association of Florida  
Food & Water Watch  
Friends of Mohawk Trail State Forest  
Friends of the Earth U.S.  
Global Justice Ecology Project  
Institute for Agriculture and Trade Policy  
John Muir Project of Earth Island Institute

Johns Hopkins Center for a Livable Future  
Menlo Spark  
Mercy for Animals  
National Black Environmental Justice Network  
National Family Farm Coalition  
NC Climate Solutions Coalition  
NC Environmental Justice Network  
NC-APPPL: Alliance to Protect Our People and  
the Places We Live  
New York Lawyers for the Public Interest  
North Range Concerned Citizens

Partnership for Policy Integrity  
Public Justice  
Rachel Carson Council  
Rapid Shift Network  
RedTailed Hawk Collective  
RESTORE: The North Woods  
Robeson County Cooperative for Sustainable  
Development  
San Francisco Bay Physicians for Social  
Responsibility

Sierra Club  
Southern Forests Conservation Coalition  
Southern Oregon Climate Action Now  
SouthWings  
Spirit of the Sun  
Spruill Farm Conservation Project  
The Enviro Show  
The Rewilding Institute  
TwinZIN Fitness

Unite North Metro Denver  
United Methodist Women  
Wall of Women  
Watertown Faces Climate Change  
West End Revitalization Association (WERA)  
Women's International League for Peace and  
Freedom, Santa Cruz branch  
198 methods  
350 Humboldt  
350 Seattle  
350 Triangle