From: Wufoo
To: Staff, CAO (PUC)
Subject: Submitted Public Comment Form
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Provide the docket's number.	E-999/CI-24-352
Leave a comment on the docket. *	The Institute for Agriculture and Trade Policy thanks the MN PUC for the opportunity to comment on questions around Minnesota's Carbon Free Standard. We submit the attached comment and welcome and questions from the Commission.
Attach a File	mn_puc_carbon_free_fuels_iatp.pdf 189.66 KB • PDF

June 4, 2025

To: Minnesota Public Utilities Commission

Re: In the Matter of a Commission Investigation into a Fuel Life-Cycle Analysis Framework for Utility Compliance with Minnesota's Carbon-Free Standard.

PUC Docket Number: E-999/CI-24-352

The Institute for Agriculture and Trade Policy (IATP) thanks the Minnesota Public Utilities Commission (PUC) for the opportunity to comment on Minnesota's Carbon-Free Standard. IATP is a 38-year-old, non-profit organization based in Minneapolis. We have worked for more than two decades at the intersection of agriculture and climate policy, advocating for policies that support family farmers, rural communities and protect the climate.

IATP's comment focuses on one of the questions the PUC requests input on:

"Whether biomass, renewable natural gas, and solid waste should be eligible as fully or partially carbon-free generation resources based on a fuel life-cycle analysis."

IATP has extensively analyzed policies that benefit so-called renewable natural gas derived from the manure waste produced at large-scale animal operations.[1] IATP does not believe renewable natural gas (RNG) from such facilities should be considered fully or partially "carbon-free" generation for several reasons:

1) It is impossible to separate the manure-based gas from the animal that produced the manure. RNG captured from manure waste produced by large-scale cattle or hog operations is an attempt to capture some (but not all, they often leak[2]) of the methane gas produced from the operation. With or without the RNG capture, the pollution source (the large-scale animal facility) will emit the potent greenhouse gases (GHGs) methane and nitrous oxide, as well as other air pollutants, including carbon dioxide.[3] According to the Environmental Protection Agency's Greenhouse Gas Inventory, methane emissions from ruminants (mostly cattle) are the nation's second-largest

[1] https://www.iatp.org/bad-climate-policy-factory-farms

[2] https://www.sciencedaily.com/releases/2022/06/220617111456.htm

[3] https://pmc.ncbi.nlm.nih.gov/articles/PMC9589174/

source of agriculture GHG emissions.[4] The Minnesota Pollution Control Agency's (MPCA) latest state GHG data also found that enteric fermentation from cows was the second highest source of emissions in the agriculture sector.[5] Digestate, the remaining manure after methane gas has been captured in a biogas facility, has higher concentrations of ammonia and when applied as fertilizer can lead to higher emissions of nitrous oxide.[6] A carbon-free fuel should not be derived from a significant source of GHG emissions and air pollutants associated with public health risks.[7]

2) Just as it is impossible to separate RNG from the manure produced by livestock, biogas also cannot be separated from emissions coming from the production of feed necessary for that facility's livestock. The EPA GHG Inventory reports that nitrous oxide emissions tied to nitrogen fertilizer use particularly for corn production is the highest source of national-level agriculture emissions.[8] The MPCA's latest report reached the same finding for Minnesota, where the agriculture sector is responsible for 25% of the state's emissions.[9] Aside from climate emissions, the state continues to struggle to reduce water pollution tied to nitrogen fertilizer to produce corn, which often ends up as animal feed.[10]

3) Unlike other "carbon-free" fuels, biogas facilities are vulnerable to extreme weather events, including spills and leaks. A biogas digester at a dairy owned by Riverview in Western Minnesota recently experienced a spill.[11] Other spills in Iowa[12] and Wisconsin[13]

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[4] https://www.regulations.gov/document/EPA-HQ-OAR-2024-0591-0003

[5] https://www.pca.state.mn.us/sites/default/files/lraq-3sy25.pdf

[6] https://pubmed.ncbi.nlm.nih.gov/37967706/

[7] https://doi.org/10.1089/env.2021.0025

[8] https://www.regulations.gov/document/EPA-HQ-OAR-2024-0591-0003

[9] https://www.pca.state.mn.us/sites/default/files/lraq-3sy25.pdf

[10] https://www2.startribune.com/nitrate-pollution-minnesota-groundwater-farm-fertilizer-mpca-wells-epa/600310942/

[11] https://www.wctrib.com/news/local/dairy-near-pennock-minnesota-contains-manure-spillage-attributed-to-tank-failure

[12] https://iowacapitaldispatch.com/2022/07/06/company-filled-massive-manure-container-despite-signs-of-a-leak-dnr-says/

[13] https://wisconsinexaminer.com/2022/02/14/manure-leaks-into-creek-from-new-green-facility/

point to the risks associated manure-based RNG – risks that other carbon-free fuels do not pose to surrounding rural communities.

4) A limitation of policies that support biogas in Minnesota is that, in many cases, the GHG benefits have already been claimed by other states through purchased credits, particularly California. California's Low Carbon Fuel Standard (LCFS) provides credits to biogas facilities all over the country, including Minnesota, as long as the methane gas ends up in a pipeline that goes to California. In fact, most of California's LCFS biogas credits are from out-of-state.[14] When a Minnesota RNG operation accesses the California LCFS credit, California now owns that GHG reduction, not Minnesota. Known as the double-counting problem, this is a particular challenge for biogas projects because they are so expensive and depend on a variety of federal and state subsidies, including credits, for financing.

5) RNG produced from manure is only economically viable for the largest operations, where hundreds or thousands of animals are managed within a concentrated animal feeding operation (CAFO) producing enormous amounts of manure. The EPA's AgSTar program recommends that for methane digester projects, dairies with more than 1,000 animals and hog operations with more than 5,000 animals are most likely to be successful.[15] When the manure from CAFOs provides another income stream to the operation, it creates an incentive for the farm to add animals[16],[17] and potentially more emissions. By providing two income streams (animal or milk and gas) for only the largest operations, manure-based RNG favors larger operations over small and mid-sized farms, and over those farms that use less emitting pasture-based systems to raise animals.

6) The transition to CAFOs nationally has resulted in increased concentration in animal and dairy production, including the massive loss of farmers. In Minnesota, according to the most recent USDA agricultural census, from 1997 to 2022 the state lost almost 4,000 beef cattle farms, 7,000 dairy farms, and nearly 5,000 hog farms.[18] Public subsidies and

[14] https://ww2.arb.ca.gov/resources/documents/lcfs-data-dashboard

[15] https://www.epa.gov/sites/default/files/2014-12/documents/agstar-handbook.pdf

[16] https://foe.org/wp-content/uploads/2024/03/Factory-Farm-Gas-Brief_final.pdf

[17] https://www.thegazette.com/agriculture/more-manure-means-more-energy-iowa-dairies-with-biogas-digesters-are-growing-their-herds-which-c/?utm_medium=referral&utm_source=shareArticleButton&utm_campaign=shareArticleButton

[18] https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1,_Chapter_1_State_Level/Minnesota/st27_1_001_001.pdf

credits for manure-based RNG threaten to further concentrate farm ownership in Minnesota.

7) The CAFO system is not naturally occurring or inevitable. It has benefited enormously from federal and state policies through both direct (loans and grants) and indirect (subsidized feed) support, as well as regulatory exemptions.[19] A different set of government policies could support a different system of animal production that is less emitting and less polluting. Much larger gains could be achieved through more proven options to reduce GHG emissions already on the table (such as shifting to dried manure compost systems,[20] and more diverse, agroecological systems[21] that require less livestock, no manure lagoons and less nitrogen fertilizer).

For all of the above reasons, IATP urges the PUC to not consider RNG from large-scale animal operations as "carbon-free." We thank the PUC for consideration of these comments and welcome any questions or requests for additional information (Ben Lilliston, blilliston@iatp.org).

[19] https://www.foodandwaterwatch.org/2024/09/24/industry-lies-factory-farm-regulation/

[20] https://www.epa.gov/agstar/practices-reduce-methane-emissions-livestock-manure-management

[21] https://www.sciencedirect.com/science/article/abs/pii/S1877343523000222