

Friends of Toppenish Creek Comments on WA Department of Commerce Funding for Anaerobic Dairy Manure Digesters.

November 14, 2022

The WA State Dept. of Commerce (Commerce) is planning distribution of \$1.8 million to promote construction of Anaerobic Digesters (ADs) that convert manure methane to renewable natural gas (RNG). This expenditure was authorized under the CEF5 Rural Clean Energy Program and appears in sub section (b) 14 of 1064 of the Chapter 332, Laws of 2021 (the 2021-23 biennial Capital Budget). Commerce will accept public comments until Nov. 17, 2022.¹

Friends of Toppenish Creek (FOTC) believes that the WA Legislature has prematurely accepted narrow, selectively chosen arguments supporting ADs. Government has failed to look at the many adverse impacts from these facilities. FOTC respectfully asks Commerce to delay funding of ADs until all the facts are on the table.

ADs only capture methane that is produced when manure is stored in anaerobic lagoons. ADs do not, and cannot, capture the methane that is produced by high producing milk cows from enteric fermentation (burping and farting). For every ton of methane that is refined in ADs three tons of methane from enteric fermentation escape into the atmosphere.^{2,3}

Subsidizing ADs in Yakima County will most likely result in more cows excreting more manure because more manure means more RNG means more money.^{4,5,6} And more manure leads to higher levels of methane (CH₄), nitrous oxide (N₂O), volatile organic compounds (VOCs), cancer inducing VOCs, ozone (O₃), ammonia (NH₃), hydrogen sulfide (H₂S), sulfur dioxide (SO₂), oxides of nitrogen (NO_x), and fine particulate matter (PM 2.5), in the air that people breathe every minute of every day.

¹ Rural Clean Energy Innovation. WA State Dept. of Commerce. 2022.

<https://www.commerce.wa.gov/growing-the-economy/energy/clean-energy-fund/rural-clean-energy/>

² Overview of Greenhouse Gasses. U.S. Environmental Protection Agency. 2022.

<https://www.epa.gov/ghgemissions/overview-greenhouse-gases>

³ Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990 – 2016, Agriculture. U.S.

Environmental Protection Agency. https://www.epa.gov/sites/default/files/2018-01/documents/2018_chapter_5_agriculture.pdf

⁴ Foehringer-Merchant, E. & Van Deelen, G. 2022. California has provided incentives for methane capture at dairies but the program may have unintended consequences. Inside Climate News.

https://insideclimatenews.org/news/19092022/dairy-digesters-methane-california-manure/?utm_source=InsideClimate+News&utm_campaign=c0f24b9e0a-&utm_medium=email&utm_term=0_29c928ffb5-c0f24b9e0a-329224221

Currently there is no monitoring of these hazardous and criteria air pollutants in the Lower Yakima Valley (LYV) aside from measurement of particulate matter.⁷ The WA State Dept. of Ecology and the Yakima Regional Clean Air Agency instead rely on models that have not been validated with air sampling on the ground.⁸ In addition to contributions to global warming, these pollutants harm the health of people, plants, and animals.

Monitoring of fine particulate matter in the LYV reveals levels approaching cutoffs for national air quality standards (NAAQS). If Yakima County air quality exceeds these standards, there are consequences for public health and for participation in federal funding.⁹

NAAQS require fine particulate levels of $< 35 \mu\text{m}^3$ in a 24 hour period. One AD permit application predicts that emissions from that operation will increase the level of fine particulate matter for the 24 hour measurement from a background of $31 \mu\text{m}^3$ to $34.6 \mu\text{m}^3$.^{10, 11}

There are no provisions in AD funding to support public services that address the adverse consequences of increased air pollution associated with manure digesters. Therefore, Yakima County taxpayers, will have to address the fallout unassisted.¹² We are relatively poor people who prefer to dedicate our limited resources to other projects. We would rather build soccer fields than purchase high efficiency particulate absorbing (HEPA) filters.

⁵ Van Deelen, G. & Foehringer-Merchant, E. 2022. Just two development companies drive one of California's most controversial climate programs: manure digesters. Inside Climate News. https://insideclimatenews.org/news/20092022/just-two-development-companies-drive-one-of-californias-most-controversial-climate-programs-manure-digesters/?utm_source=InsideClimate+News&utm_campaign=c0f24b9e0a-&utm_medium=email&utm_term=0_29c928ffb5-c0f24b9e0a-329224221

⁶ Foehringer-Merchant, E. & Van Deelen, G. 2022. Expansion of lucrative dairy digester market is sowing environmental worries in the U.S. Inside Climate News. https://insideclimatenews.org/news/22092022/dairy-digester-market-california/?utm_source=InsideClimate+News&utm_campaign=c0f24b9e0a-&utm_medium=email&utm_term=0_29c928ffb5-c0f24b9e0a-329224221

⁷ Personal communications with the Yakima Regional Clean Air Agency. Available on request.

⁸ Personal communications with the WA State Dept. of Ecology. Available on request.

⁹ Air Quality in Yakima County. The Ramifications of PM 2.5 "Non-Attainment" Status. <https://www.yakimacleanair.org/resources/education.html>

¹⁰ Friends of Toppenish Creek Comments on WA Department of Commerce Funding for Anaerobic Dairy Manure Digesters. SS RNG Construction Application. <http://www.friendsoftoppenishcreek.org/cabinet/data/SS%20RNG%20Construction%20Application.pdf>

ADs cost millions of dollars to build and even more to maintain.^{13, 14} It would be unreasonable to fund and permit digesters at high cost to investors and then ask them to dismantle the digesters after monitoring shows increases in air pollution and adverse impacts on public health.

Respectfully.

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¹¹ Friends of Toppenish Creek Comments on WA Department of Commerce Funding for Anaerobic Dairy Manure Digesters. SS RNG Conditional Use Permit Application. [http://www.friendsoftoppenishcreek.org/cabinet/data/SS%20RNG%20CUP2021-00059_SEP2021-00044_\(Under_Review\).pdf](http://www.friendsoftoppenishcreek.org/cabinet/data/SS%20RNG%20CUP2021-00059_SEP2021-00044_(Under_Review).pdf)

¹² The Yakima Regional Clean Air Agency does not regulate air emissions from Yakima County dairies and collects no fees from the dairies, even though the WA Clean Air Act, RCW 70A.15.1005 states: It is the policy of the state that the costs of protecting the air resource and operating state and local air pollution control programs shall be shared as equitably as possible among all sources whose emissions cause air pollution. See Arguments for Dissolving the Yakima Regional Clean Air Agency. 2021. At <http://www.friendsoftoppenishcreek.org/cabinet/data/EPA%20Air%20Attachment%202021%20FO%20TC%20Arguments%20for%20Dissolving%20the%20YRCAA.pdf>

¹³ Funding On-Farm Anaerobic Digestions. 2021. U.S. Environmental Protection Agency. https://www.epa.gov/sites/default/files/2014-12/documents/funding_digestion.pdf

¹⁴ Completing a Feasibility Study for an Anaerobic digestion Project. WA State University. 2018 <https://pubs.extension.wsu.edu/completing-a-successful-feasibility-study-for-an-anaerobic-digestion-project-anaerobic-digestion-systems-series>