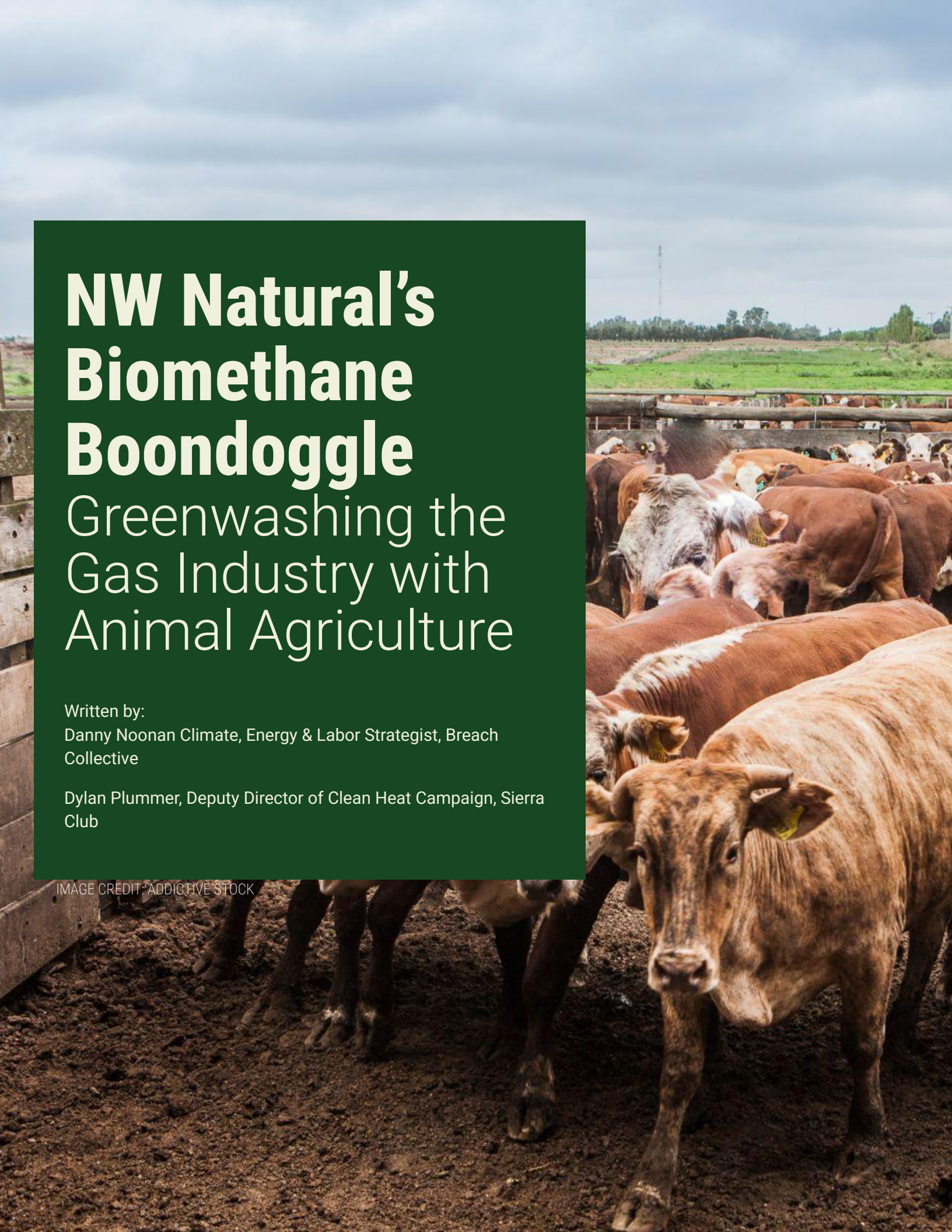




NW Natural's Biomethane Boondoggle

Greenwashing the Gas Industry with Animal Agriculture

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IMAGE CREDIT: ADDICTIVE STOCK

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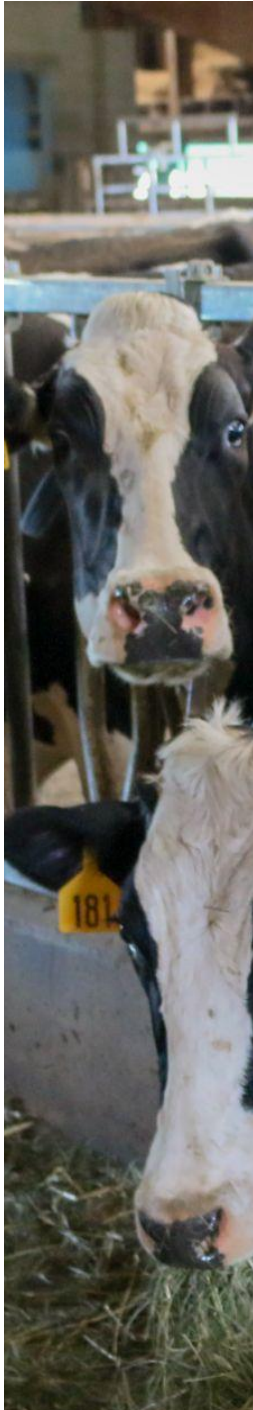
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Executive summary

In 2019, Oregon passed SB 98, legislation authored and supported by NW Natural, the state's largest gas company. The law allows utilities to make significant investments into polluting utility-grade biomethane (a.k.a. Renewable Natural Gas or RNG)¹ with ratepayer dollars. Seven years after the law's passage, Oregon's gas utilities have made little progress to displace annual methane gas demand despite the tens of millions of dollars directed towards biomethane sources. Meanwhile, there is growing concern over biomethane investments in Oregon, and nationally, due to the mounting evidence that shows they are:

1. financially supporting two of the five most polluting slaughterhouses in the country while greenwashing their dirty practices;
2. accelerating both the consolidation of animal agriculture within massive multinational corporations and the rapid expansion of concentrated animal feeding operation (CAFO) facilities;
3. likely *increasing* economy-wide greenhouse gas (GHG) emissions due to methane gas leaks at biomethane facilities;
4. increasing localized air and water pollution in vulnerable communities near methane digesters;
5. increasing gas utility rates while providing little to no benefit to consumers; and
6. delaying electrification and slowing decarbonization.

Reporting from ProPublica has shown that gas utilities pushed SB 98 as a means to stave off emissions reduction regulations, which would limit or reduce their customer base.²

It is increasingly apparent that, despite the claims of the gas industry, investments in biomethane are causing more harm than good. Oregon communities are paying for gas utility emissions at the expense of their clean air and clean water, and companies are failing to provide any tangible benefit to their ratepayers or addressing the climate crisis. This report finds that Oregon lawmakers should seriously reconsider SB 98, and that greater regulation is needed to address gas utility emissions.³

¹ We define biomethane or biogas as the raw gas captured from biogenic sources, such as organic waste at landfills, farms, slaughterhouses, and wastewater facilities. Utility-grade biomethane is biomethane that has been purified or "upgraded" to the quality necessary to use in utility gas distribution networks. This latter form of biomethane is synonymous with the gas industry-favored term "Renewable Natural Gas" or RNG. As this report details, utility-grade biomethane very often has a positive emissions intensity and/or incentivizes sources and quantities of waste that would not exist absent a market for it. Referring to such forms of methane gas in those circumstances as "renewable" is a misnomer.

² McKenzie Funk, "Oregon's Largest Natural Gas Company Said It Was Going Green. It Sells as Much Fossil Fuel as Before." (ProPublica, Sep. 13, 2024), <https://www.propublica.org/article/nw-natural-gas-oregon-fossil-fuel>.

³ Monica Samayoa, "Customers accuse NW Natural of greenwashing, in lawsuit over its carbon reduction program" (OPB, Oct. 10, 2024), <https://www.opb.org/article/2024/10/10/nw-naturals-smart-energy-program-lawsuit-carbon-emissions-environment/>; McKenzie Funk, "Oregon's Largest Natural Gas Company Said It Was Going Green. It Sells as Much Fossil Fuel as Before." (ProPublica, Sep. 13, 2024), <https://www.propublica.org/article/nw-natural-gas-oregon-fossil-fuel>.

Legal Context for Biomethane in Oregon

Oregon Senate Bill 98 (SB 98), ORS 757.390–757.398, allows Oregon methane gas utilities to make investments in polluting utility-grade biomethane with ratepayer dollars, even when the fuel is significantly more expensive than conventional gas.

Authored and promoted by NW Natural and the broader gas industry, SB 98 was passed by the legislature and signed by Governor Brown in 2019.⁴ The rationale for SB 98 was that it would permit Oregon’s gas utilities to invest in biomethane and other sources of RNG, even when doing so would not be the least-cost resource for customers. Theoretically, this would allow gas utilities to replace a substantial proportion of their fossil fuel gas supply with biomethane; in turn, reducing emissions and supporting Oregon’s climate goals.⁵



Though the stated goals of SB 98 appeared laudable, reporting in ProPublica has presented evidence that the primary motivation of gas utilities in pushing SB 98 was to stave off emissions reduction regulations that would have the effect of limiting or reducing gas utilities’ customer base. Gas utility media campaigns and public relations pushes, like NW Natural’s “Less We Can” campaign,⁶ present biomethane as an effective emissions reduction tool. Environmental and public interest groups say more proven, more effective, and less costly solutions such as electrification and accelerated heat pump adoption are more effective. Despite the legislature’s good intentions, with the benefit of hindsight, it is now clear that SB 98’s passage effectively played into and lent credibility to gas utilities’ anti-regulatory campaign.

SB 98’s Disastrous Track-Record

Seven years after SB 98’s passage, Oregon’s gas utilities have made virtually no progress in displacing fossil gas with biomethane.⁷ Investments have done little, if anything, to reduce gas emissions for customers in Oregon or elsewhere. Even more troubling, the law may be incentivizing and underwriting harmful animal agricultural practices in far away states that arguably *increase* methane emissions and local pollution.⁸

⁴ NW Natural, “Governor Kate Brown Holds Ceremony to Sign SB 98 for Renewable Natural Gas” (Sep. 17, 2019), <https://www.nwnatural.com/about-us/the-company/newsroom/2019-governor-brown-sb98-signing-ceremony>.

⁵ Funk, *supra* note 3.

⁶ NW Natural, “Our Low Carbon Pathway”, <https://www.nwnatural.com/about-us/environment/less-we-can>.

⁷ Monica Samayoa, “NW Natural once again misses its own targets to offset emissions with renewable natural gas” (OPB, Jul 10, 2024), <https://www.opb.org/article/2024/07/10/nw-natural-misses-own-targets-renewable-natural-gas/>.

⁸ Funk, *supra* note 3.

Under SB 98, NW Natural has sought regulatory approval for rate basing (charging customers for) investments in two biomethane projects:

Lexington RNG

Starting in 2021, NW Natural invested \$8.3 million in a project situated at a Tyson Foods beef packaging facility in Lexington, Nebraska, which closed in early 2026.⁹ The plant hoped to use “membrane technology to convert methane (raw biogas) derived from the anaerobic digestion of food processing-based wastewater and other byproducts” to produce utility-grade biomethane, then pipe it into local utility Black Hills Energy’s gas distribution system for delivery to their customers.¹⁰ NW Natural retained the environmental attributes of the biomethane (Renewable Thermal Credits or RTCs) and “applied” the RTCs for emissions accounting purposes as a form of GHG offset.¹¹

NW Natural’s Oregon Public Utility Commission (OPUC) filings indicate that the Lexington facility was capable of producing up to 1.9 million therms (190,000 MMBtu) of biomethane per year.¹² However, NW Natural’s 2021 SB 98 Compliance Report indicates that the facility was only expected to produce less than half this amount in 2022 – 84,587 MMBtu – despite coming online in January of that year.¹³ The Compliance Report further indicates that the GHG intensity of the biomethane produced at the Lexington facility was initially calculated to be 32.57 g CO₂e/MJ,¹⁴ only about 42% lower than fossil methane gas (read more of our analysis on the low quality of NW Natural’s biomethane sources on page 14).¹⁵

Now, despite the fact that the facility is closing after being operational for just a few years, NW Natural is asking the OPUC to defer the costs to ratepayers.¹⁶

Dakota City RNG

In 2023, NW Natural announced its intention to invest \$12.5 million in a second project at a separate Tyson Foods beef packaging facility in Dakota City, Nebraska.¹⁷ The facility uses “pressure swing adsorption upgrading technology to convert methane (raw biogas) derived from the anaerobic digestion of food processing-based wastewater and other byproducts at the Tyson Fresh Meats beef packaging plant into

⁹ NW Natural, *Application of NW Natural for a General Rate Revision* (PUC Docket No. UG 435, Dec. 17, 2021), NW Natural/100, Chittum/7, <https://edocs.puc.state.or.us/efdocs/UAA/ug435uaa161326.pdf>. However, NW Natural’s 2021 SB 98 compliance report redacts as confidential the actual value invested in the project. NW Natural, *OAR 860-150-0600(1)—Annual Renewable Natural Gas Compliance Report* (PUC Docket No. RG 99, Jun. 30, 2022), 1, <https://edocs.puc.state.or.us/efdocs/HAA/haa181512.pdf>; Monica Samayoa, *NW Natural seeks to shift cost of failed RNG investment to customers*, Oregon Public Broadcasting (Jan. 2026), <https://www.opb.org/article/2026/01/06/nw-natural-renewable-gas-tyson-foods-rng-oregon/>.

¹⁰ NW Natural, *Application of NW Natural for a General Rate Revision*, *supra* note 9, NW Natural/100, Chittum 7.

¹¹ *Id.*

¹² *Id.*

¹³ NW Natural, *OAR 860-150-0600(1)—Annual Renewable Natural Gas Compliance Report*, *supra* note 9, 3. For unclear reasons, NW Natural has revised the GHG intensity of RTCs from this facility in future reports to 23.11 g CO₂e/MJ. See, e.g., NW Natural, *RG 99—2025 Annual Renewable Natural Gas Compliance Report* (PUC Docket No. RG 99, Jun. 30, 2026), 6, <https://edocs.puc.state.or.us/efdocs/HAQ/rg99haq347350039.pdf>.

¹⁴ *Id.*

¹⁵ See Shell, *Natural gas, CO₂ emissions and climate change* (Sep. 19, 2011), <https://blogs.shell.com/2011/09/19/naturalgas/> (citing a GHG intensity of fossil natural gas of 0.056 kg – or 56.00 g – CO₂/MJ). However, Oregon’s Climate Protection Program excludes emissions from “biomass-derived fuels” from regulatory obligations (i.e. the emissions “cap” in the Program’s cap-and-reduce scheme) altogether. In doing so, the Program effectively treats RNG procured by gas utilities as having a GHG intensity of zero. See OAR 340-273-0110(3)(b)(B)(i).

¹⁶ NW Natural, *UM___ - NW Natural’s Application for Authorization to Defer Costs and Revenues - Lexington RNG Project* (PUC Docket No. UM 2422, Dec. 29, 2025), <https://edocs.puc.state.or.us/efdocs/HAA/haa342590028.pdf>.

¹⁷ NW Natural, *Renewable Natural Gas Adjustment Mechanism—Dakota City* (PUC Docket No. UG 462, Feb. 28, 2023), NW Natural/100, Chittum/41, <https://edocs.puc.state.or.us/efdocs/HAA/ug462haa91735.pdf>.

biomethane.”¹⁸ This biomethane is then piped into local utility MidAmerican Energy Company’s gas distribution system for delivery to their customers. MidAmerican Energy Company treats this gas as conventional natural gas. NW Natural retains the RTCs and applies them to their own resources.¹⁹

NW Natural’s PUC filings claim that the Dakota City facility is capable of producing up to 1 million therms (100,000 MMBtu) of biomethane per year.²⁰ The public version of NW Natural’s 2021 SB 98 Compliance Report redacted the expected 2023 production volume of biomethane.²¹ The Compliance Report further indicates that the GHG intensity of the biomethane produced at the Dakota City facility was initially calculated to be 20.99 g CO₂e/MJ,²² about 62% lower than fossil natural gas.²³ NW Natural’s 2023, 2024 and 2025 SB 98 compliance reports redact the volume of biomethane and quantity of RTCs that the utility has been receiving from the facility in these reporting years.²⁴

Other investments and procurements

Additionally, news outlets previously reported that NW Natural invested \$43 million in February of 2024 to construct a biomethane facility at a landfill in East Wenatchee, WA. NW Natural claimed that the facility, which was not yet operational, could produce as much as 300,000 MMBtu of biomethane annually.²⁵ The utility further claimed that the landfill already contained a mechanism for capturing and flaring the biogas produced there.²⁶ It is unclear from public reporting whether the physical gas itself would have entered NW Natural’s distribution system, or whether—as with the above investments—NW Natural would sell the gas to another utility and retain the RTCs. The GHG intensity of this gas also has not been disclosed.

It appears that NW Natural has quietly abandoned this planned investment in East Wenatchee. As of the time of publication, NW Natural has yet to file for regulatory approval to rate base this investment. An investor presentation from March 2024 describes the investment as “planned,” yet NW Natural’s 2025 Integrated Resource Plan’s only reference to the facility is that the company “would welcome” its development.²⁷ While the facility was listed on NW Natural’s website as a “utility RNG project” in late 2024, it is not presently listed on the company’s website.²⁸ There is also no indication in NW Natural’s most recently-filed SB 98 compliance reports, from 2024 and 2025, that the utility has either invested in or received any biomethane from the facility.²⁹

¹⁸ *Id.*, NW Natural/100, Chittum/11.

¹⁹ *Id.*

²⁰ *Id.*

²¹ NW Natural, OAR 860-150-0600(1)—*Annual Renewable Natural Gas Compliance Report* (Jun. 30, 2022), *supra* note 9, 4.

²² *Id.*

²³ Shell, *supra* note 15. This value was revised upwards to 21.99 g CO₂e/MJ in future compliance reports, again for unclear reasons. See NW Natural, RG 99—*2025 Annual Renewable Natural Gas Compliance Report*, *supra* note 13, 7.

²⁴ NW Natural, RG 99—*2023 Annual Renewable Natural Gas Compliance Report* (PUC Docket No. RG 99, Jun. 28, 2024), <https://edocs.puc.state.or.us/efdocs/HAQ/rq99haq329698054.pdf>; NW Natural, RG 99—*2024 Annual Renewable Natural Gas Compliance Report* (PUC Docket No. RG 99, Jun. 30, 2025), <https://edocs.puc.state.or.us/efdocs/HAQ/rq99haq337816115.pdf>; NW Natural, RG 99—*2025 Annual Renewable Natural Gas Compliance Report*, *supra* note 13.

²⁵ Emily Thornton, “Greater Wenatchee Regional Landfill to house \$43 million renewable natural gas project” (The Wenatchee World, Jan. 30, 2024),

https://web.archive.org/web/20240130223150/https://www.wenatcheeworld.com/news/local/greater-wenatchee-regional-landfill-to-house-43-million-renewable-natural-gas-project/article_5f13a1e0-bf06-11ee-b317-5fed8d09451f.html

²⁶ *Id.*

²⁷ NW Natural Holdings, *Investor Presentation* (Mar. 2024), 30, https://s23.q4cdn.com/611156738/files/doc_presentations/2024/Mar/05/march-2024-ir-presentation_final.pdf; NW Natural, NW Natural 2025 Integrate Resource Plan (Aug. 2025), 7-15 (pdf p. 240), https://www.nwnatural.com/-/media/nwnatural/pdfs/nwn2025integratedresourceplan_chapters.pdf.

²⁸ NW Natural, “Fueling a renewable energy future” (Dec. 13, 2024), <https://web.archive.org/web/20241213115200/https://www.nwnatural.com/about-us/environment/renewable-natural-gas#tab-3-focus>. Cf. NW Natural, “Fueling a renewable energy future” (Jan. 7, 2026),

<https://web.archive.org/web/20260107134843/https://www.nwnatural.com/about-us/environment/renewable-natural-gas#tab-3-focus>

²⁹ NW Natural, RG 99—*2024 Annual Renewable Natural Gas Compliance Report*, *supra* note 24.

NW Natural has further purchased varying quantities of RTCs from biomethane produced at various facilities in states such as Utah, Wisconsin and New York.³⁰

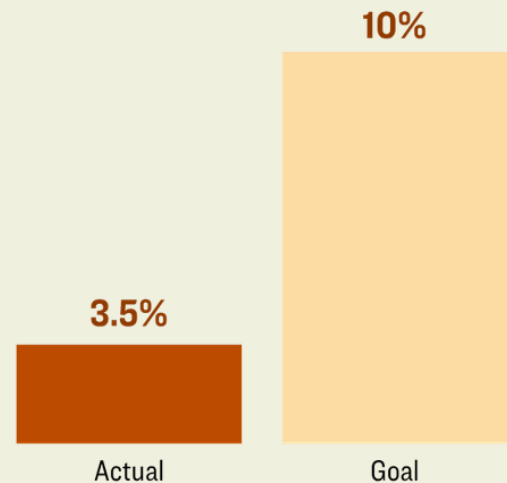
SB 98 Investments in Context

In a May 2, 2023 press release regarding the Dakota City RNG project, NW Natural indicated that the Dakota City and Lexington projects, combined, amount to 240,000 MMBtu.³¹ This appears to have been revised downwards from NW Natural's OPUC submissions, where the Lexington Project was described as producing up to 190,000 MMBtu, and the Dakota City project as producing up to 100,000 MMBtu, or 290,000 MMBtu combined.³² In either case, according to NW Natural's SEC disclosures, total gas supplied by the company in 2023 was over 120 million MMBtu (120,667,400 MMBtu), an increase of almost 7 million MMBtu (6,377,700 MMBtu), or 5.58% since 2020 (114,289,700 MMBtu).³³ The 240,000 MMBtu reflected in NW Natural's first two SB 98 investments represents only 0.2% of the gas supplied by NW Natural in 2023, and only 3.7% of the increase in gas supplied annually between 2020 and 2023. NW Natural's SB 98 investments through 2023 would appear to amount to significantly less than 1% of Oregon's total gas demand during that same period.

The failure of NW Natural's biomethane investments and purchases to amount to a meaningful portion of the utility's overall gas supply is reinforced by NW Natural's OPUC filings. According to the utility's 2024 compliance report, NW Natural had 1.02% of its gas supply met by biomethane from SB 98 investments *and* purchases of RTCs.³⁴ The utility increased this to 3.35% in 2025 – the first year that SB 98 targets increased from 5% to 10% – without making any new biomethane investments (i.e. the additional volume of biomethane RTCs was achieved entirely through market purchases).³⁵ At the same time, NW Natural's purchased biomethane became much dirtier in 2025. Average GHG emissions intensity increased 1600%: from -2.26 g CO₂e / MJ in 2024 to 33.76 g CO₂e / MJ in 2025.³⁶ In other words, NW

Missed Goals, High Pollution

With over \$60 million in planned investments by 2025, biomethane and credits only accounted for 3.35% of Northwest Natural's accounting, far below the 10% goal.



Between 2024 to 2025 carbon intensity of this biomethane **increased nearly 1,600%**, massively reducing projected climate pollution savings.

³⁰ See, e.g., NW Natural, OAR 860-150-0600(1)—*Annual Renewable Natural Gas Compliance Report*, *supra* note 9, 1. See also Pete Danko, “NW Natural to buy renewable gas credits, puts out call for more RNG” (Portland Business Journal, Aug. 9 2021), <https://www.bizjournals.com/portland/news/2021/08/09/nw-natural-rng-rtc-deal.html>.

³¹ NW Natural, *NW Natural Begins Producing RNG at Second Tyson Foods Facility* (May 2, 2023), <https://www.businesswire.com/news/home/20230502005546/en/NW-Natural-Begins-Producing-RNG-at-Second-Tyson-Foods-Facility>.

³² See *supra* notes 12 and 20.

³³ See NW Natural Holdings, *2020 Annual Report*, 51, <https://ir.nwnaturalholdings.com/financials/annual-reports/default.aspx> and NW Natural Holdings, *2023 Annual Report*, 50, <https://ir.nwnaturalholdings.com/financials/annual-reports/default.aspx>. Note also that (i) NW Natural does not separate out their Oregon and Washington sales, but the 2023 Annual Report states that 88% of their gas utility customers are in Oregon; and (ii) annual volumes of gas supplied by NW Natural have fluctuated significantly over the past few years both above and below the annual volume for 2023.

³⁴ NW Natural, OAR 860-150-0600(1)—*Annual Renewable Natural Gas Compliance Report*, *supra* note 13, 1 (“The total volume of RNG acquired during the compliance year...represents 0.21% of the Oregon sales load delivered to retail customers.”).

³⁵ NW Natural, *RG 99—2025 Annual Renewable Natural Gas Compliance Report*, *supra* note 13.

³⁶ *Id.*, 5.

Natural's overall biomethane "supply" in 2025 was only 40% less emissions intensive than fossil sources, while some of the RTCs were obtained from sources that were nearly twice as emissions intensive as fossil gas.³⁷ The high emissions intensity of NW Natural's biomethane sources greatly reduces the purported climate benefit of RNG (see page 14 below).

In summary, in the seven years since SB 98's passage, NW Natural has invested over \$60 million of ratepayer money into biomethane capture in the form of RTCs purchased from two large meat processing plants based in Nebraska and operated by Tyson Foods, a multinational corporation, and from a yet-to-be-operational landfill facility. Even with one of the most favorable regulatory environments for biomethane investments in the country, and even based on the most optimistic projections of biomethane production, NW Natural by all indicators appears to have fallen well short of SB 98's 5% biomethane target by the end of 2024, as well as SB 98's 10% target in 2025. This abject failure throws into question whether the future goals of 10% biomethane by 2029, and 30% biomethane by 2050 are even remotely achievable. On top of failing to benefit Oregonians, these investments have also incentivized extremely harmful animal agriculture practices in far flung locales.



Photo credit: iStock

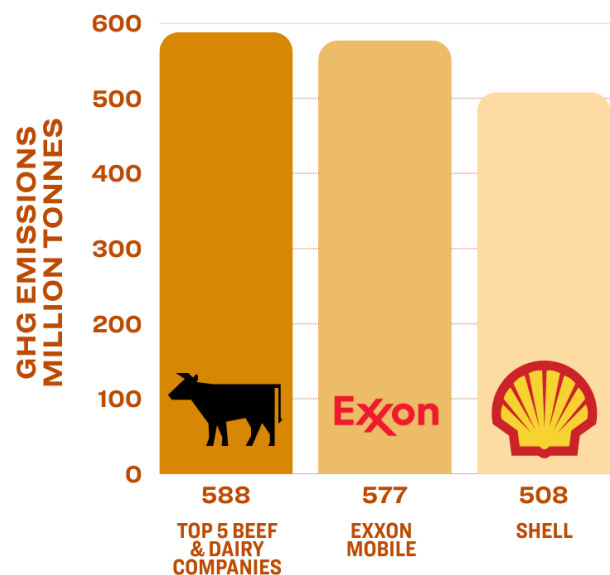
³⁷ *Id.* See also Shell, *supra* note 15.

SB 98 Incentivizes Polluting Animal Agriculture

NW Natural's primary strategy to date for acquiring biomethane is through purchasing RTCs from multinational corporations engaged in large-scale industrial animal agriculture. Specifically, these investments go to support the installation of anaerobic digesters into slaughterhouses and CAFOs, which capture the biomethane produced by decomposition of animal waste. And, while the gas never reaches Oregon, the utility relies on the credits to "reduce" emissions and comply with Oregon regulations, while aggressively promoting its investments as a means to greenwash its polluting business practices and avoid further regulation.

Utility Biomethane Investments Broadly Risk Driving The Consolidation and Intensification of Animal Agriculture

Biomethane investments do little to nothing to abate the significant environmental impacts that industrial animal agriculture has on the local communities in which it operates CAFOs and slaughterhouses. On the contrary, research indicates that a biomethane market incentivizes CAFO expansion and, in turn, increases local pollution.³⁸ Because of the large upfront costs associated with the purchase and installation of anaerobic digesters, these facilities are almost exclusively sited at massive CAFOs supplying multinational corporations, further driving the consolidation of the animal agriculture industry into fewer and fewer hands.³⁹ For example, a 2018 study indicated that biomethane production was only economically feasible for farms containing greater than 3,000 cows.⁴⁰ Even on such farms, two-thirds of the methane emissions associated with those cattle would still go uncaptured, as those emissions are produced by enteric fermentation (cow burps) rather than manure. Globally, the five most-emitting meat and dairy companies—which includes NW Natural partner Tyson Foods—release combined GHGs that are equal to those of carbon majors like Exxon, Shell or BP.⁴¹



³⁸Varun Magesh, Claire M. Morton et al, *Do Methane Mitigation Incentives Intensify Livestock Production? Evidence from California, 2016-2025*, (Nov. 2025) <https://dho.stanford.edu/wp-content/uploads/digesters.pdf>

³⁹Leadership Counsel for Justice and Accountability, *A Working Paper on the CDFA Dairy Digester Research and Development Program* (Apr. 2019), <https://leadershipcounsel.org/wp-content/uploads/2019/04/A-Working-Paper-on-GGRF-Dairy-Digester-Program.pdf>.

⁴⁰Markus Lauer et al., *Making money from waste: The economic viability of producing biogas and biomethane in the Idaho dairy industry*, 222 *Applied Energy* 621 (2018), <https://www.sciencedirect.com/science/article/pii/S0306261918305695>.

⁴¹Heinrich Böll Stiftung et al., *Big Meat and Dairy's Supersized Climate Footprint* (Nov. 2017), https://www.iatp.org/sites/default/files/2017-11/BOELL_Meat%20Dairys_A4%20factsheet%20Web_V1.pdf.

The Most Economically Attractive Agricultural Biomethane Investments have the Most Significant Local Air and Water Pollution Impacts

The scale of waste and pollution from these facilities can hardly be overstated. According to the U.S. Government Accountability Office, a single CAFO “meeting EPA’s large CAFO threshold of 700 dairy cows can create about 17,800 tons of manure annually, which is more than the about 16,000 tons of sanitary waste per year generated by the almost 24,000 residents of Lake Tahoe, California.”⁴² Yet, unlike human waste, animal waste from CAFOs is not treated before disposal on crop land. These facilities are known to severely impact both air and water quality, and disproportionately impact communities of color, low-income communities and under-resourced communities.⁴³

CAFOs have been shown to discharge waste that poses a direct threat to public health, with toxins including nitrogen, phosphorus, disease-causing pathogens and pharmaceuticals, which can run off into waterways and seep into drinking water sources.⁴⁴ These facilities also create significant air pollution as animal waste decomposes and generates dangerous pollutants such as hydrogen sulfide, ammonia, and volatile organic compounds.⁴⁵

NW Natural’s First Two SB 98 Investments Involved Two of the Most Polluting Slaughterhouses in the United States

According to a Union of Concerned Scientists report from 2024, Tyson Foods—whose Lexington and Dakota City slaughterhouses were the subject of over \$20 million in ratepayer dollars invested by NW Natural under SB 98—released 371 million pounds of pollution into U.S. waterways between 2018 and 2022. Approximately one third of this pollution occurred in Nebraska, where the Lexington and Dakota City facilities are located, and the Dakota Facility was the single largest source of Tyson’s water discharges.⁴⁶ Additionally, a 2018 report from the Environmental Integrity Project (EIP) found that the Lexington and Dakota City slaughterhouses ranked number one and number five respectively on the top ten list of slaughterhouses that discharged harmful nitrogen pollution.⁴⁷ As EIP wrote, “On the high end, the Tyson Fresh Meats Dakota City, Nebraska beef plant discharged an average of 3,084 pounds of nitrogen per day, as much as the amount in raw sewage from a city of 132,000.” EIP’s research was part of a multi-year, multi-stakeholder advocacy and litigation campaign that resulted in a consent decree in which EPA had committed to modernize water pollution standards for slaughterhouses and rendering plants. EPA has since walked back its proposed regulation, prompting additional litigation.⁴⁸

Local Impacts Felt in Oregon

The emissions shell game created by NW Natural’s SB 98 investments is due in part to the fact that these investments are situated in states with different regulatory environments, where their more localized environmental impacts are out of sight and mind of Oregonians. That said, requiring SB 98 investments to be made closer to home would not resolve fundamental concerns with the emerging biomethane market. Indeed, Oregon is currently dealing

⁴² U.S. Gov’t Accountability Office, *Concentrated Animal Feeding Operations: EPA Needs More Information and a Clearly Defined Strategy to Protect Air and Water Quality from Pollutants of Concern* 19 (Sep. 2008), <https://www.gao.gov/assets/gao-08-944.pdf>.

⁴³ Arbor Quist et al., *Disparities of industrial animal operations in California, Iowa, and North Carolina* (Oct. 2022), https://earthjustice.org/wp-content/uploads/quistreport_cafopetition_oct2022.pdf.

⁴⁴ Carrie Hribar, *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities* (2010), 4 <https://stacks.cdc.gov/view/cdc/59792>.

⁴⁵ Virginia Guidry et al., *Hydrogen Sulfide Concentrations at Three Middle Schools Near Industrial Livestock Facilities*, 27 *J. Exposure Sci. & Env’t Epidemiology* 167 (2017).

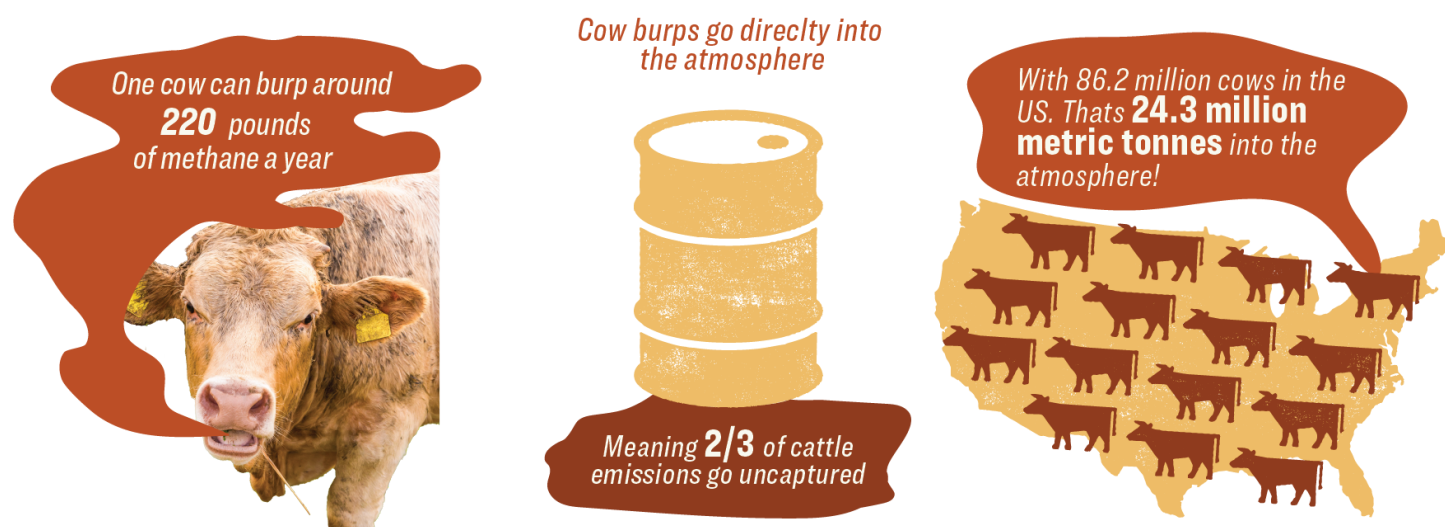
⁴⁶ Omanjana Goswami and Stacy Woods, *Waste Deep: How Tyson Foods Pollutes US Waterways and Which States Bear the Brunt* (Union of Concerned Scientists, Apr. 30, 2024), <https://www.ucsusa.org/resources/waste-deep>.

⁴⁷ Environmental Integrity Project, *Water Pollution from Slaughterhouses* (Oct. 11, 2018), <https://environmentalintegrity.org/wp-content/uploads/2018/10/Slaughterhouse-report-2.14.2019.pdf>.

⁴⁸ Food & Water Watch, *EPA Halts Rulemaking to Reduce Slaughterhouse Water Pollution* (Sept. 2, 2025), <https://www.foodandwaterwatch.org/2025/09/02/epa-halts-rulemaking-to-reduce-slaughterhouse-water-pollution/>.

with its own crisis driven by pollution from industrial animal agriculture.⁴⁹ In Northeastern Oregon, where the state's largest animal agriculture facilities are sited, nitrate pollution has impacted drinking water for thousands of residents in the Lower Umatilla Basin. According to 2011 data from the Oregon Department of Environmental Quality (ODEQ), about 13% of the nitrogen leached into water supplies comes from CAFOs in the area.⁵⁰

In short, the idea of biomethane as an environmentally friendly alternative to fracked gas is a farce. In fact, the most generous interpretation of the effects of the growing biomethane market, and the Oregon policies facilitating it, is that these investments are displacing a portion of the enormous environmental and public health impacts of the fossil fuel industry with those of the industrial animal agriculture industry. And while neither the impacts of extracting fossil methane nor the impacts of harvesting biomethane are felt directly by most Oregon residents, they are instead placed on communities less able to fight back against these facilities in faraway places. Meanwhile, at home, gas bills continue to increase and gas utilities continue to pollute our air and our climate.



⁴⁹ Pat Dooris and Jamie Parfitt, "Decades-old groundwater pollution issue in eastern Oregon earns new commitment from state agencies" (KGW8, Sep. 20, 2024), <https://www.kgw.com/article/news/local/the-story/oregon-plan-lower-umatilla-basin-wells-groundwater-pollution-nitrates/283-d6654eb7-1b6f-42ff-86a4-12a28b952b1c>.

⁵⁰ Oregon Department of Environmental Quality, *Estimation of Nitrogen Sources, Nitrogen Applied, And Nitrogen Leached to Groundwater in the Lower Umatilla Basin Groundwater Management Area* (Jun. 13, 2011), <https://www.oregon.gov/deq/FilterDocs/gw-lubgwma-nitrogen.pdf>.

Biomethane is
3x - 18x
more expensive than methane.

Biomethane is Not a Climate Solution

CAFO pollution aside, investments in biomethane are not a feasible climate solution at scale due to the scarcity of sources, the significant associated expenses, and the potential for significant upstream emissions.⁵¹ While efforts to minimize methane emissions and reuse biomethane from necessary industrial and waste projects are worthwhile, especially in closed-loop systems whereby facilities capture the methane waste that they generate and use it onsite, there is no justification for the gas industry's attempts to promote it as a panacea to decarbonize homes and buildings. This is especially true when considering the alternative: clean, highly efficient electrification.

⁵¹ Laura Feinstein and Eric de Place, "The Four Fatal Flaws of Renewable Natural Gas" (Sightline, Mar. 9, 2021), <https://www.sightline.org/2021/03/09/the-four-fatal-flaws-of-renewable-natural-gas/>.

Insufficient Supply

There is not enough biomethane for widespread use. Experts estimate that biogas could replace a mere two to five percent of the total gas consumed in the United States in 2019.⁵² In Oregon, based on a report conducted by Oregon Department of Energy (ODOE), biomethane could only “meet around 22 percent of current annual natural gas consumption needs. However, not all of this potential is feasible as 79 percent is derived from thermal gasification potential – a technology that is not operational anywhere in the U.S.”⁵³ Based on this assessment, Oregon’s commercially viable biomethane potential alone would meet only around 5 percent of current annual consumption needs.⁵⁴

Climate, Health and Safety Risks

Regardless of whether it comes from fracking, landfills, or factory farm manure, biomethane poses constant risks to public safety and health. Because biomethane is still primarily methane, infrastructure and pipeline leaks (which are widespread) contribute greatly to the climate crisis. Even small leaks can have a huge impact as methane is over 80 times more powerful at warming the planet than carbon dioxide in the near term. In addition, methane leaks from pipes, meters, and appliances in the home can increase the risk of fire and explosions.⁵⁵ Gas appliances also release dangerous conventional pollutants, including nitrogen dioxide, carbon monoxide, nitric oxide, and fine particulate matter.

Raises Energy Costs

The infrastructure needed to convert waste into gas that can be used in homes and businesses is expensive. Estimates put the costs at three to 18 times higher than the current market price for methane gas.⁵⁶ This is especially concerning when considering how quickly gas bills are already increasing in Oregon, with NW Natural having raised rates by over 50 percent in just the past few years.⁵⁷

⁵² NRDC, *A Pipe Dream Or Climate Solution? The Opportunities and Limits of Biogas and Synthetic Gas to Replace Fossil Gas* (Jun. 2020), <https://www.nrdc.org/sites/default/files/pipe-dream-climate-solution-bio-synthetic-gas-ib.pdf>.

⁵³ Oregon Department of Energy, *Biogas and Renewable Natural Gas Inventory SB 334 (2017): 2018 Report to the Oregon Legislature* (Sep. 2018), 39, <https://www.oregon.gov/energy/Data-and-Reports/Documents/2018-RNG-Inventory-Report.pdf>.

⁵⁴ It is important to note that, as detailed in recent reporting from ProPublica, this study was conducted in response to Senate Bill 334, which was supported by NW Natural as part of their efforts to promote biomethane and avoid regulation. See Funk, *supra* note 3 (“The company, NW Natural, sent a bow-tied lobbyist to the state capital to talk up renewable natural gas, and it helped write a new law promoting development of the new fuel. The company worked with the Oregon Department of Energy to prepare a statewide inventory of potential resources.”).

⁵⁵ Josie Garthwaite, *Methane and climate change* (Stanford Doerr School of Sustainability, Nov. 2, 2021), <https://sustainability.stanford.edu/news/methane-and-climate-change-0>.

⁵⁶ American Gas Foundation, *Executive Summary—Renewable Sources of Natural Gas: Supply and Emissions Reduction Assessment*, (ICF International, Dec. 2019), 5,

<https://www.gasfoundation.org/wp-content/uploads/2019/12/AGF-2019-RNG-Study-Executive-Summary-Final-12-18-2019-AS-1.pdf>.

U.S. Energy Information Administration, “Henry Hub Natural Gas Spot Price,” <https://www.eia.gov/dnav/ng/hist/rngwhhdm.htm>.

⁵⁷ See Monica Samayoa, *NW Natural rate hike could be limited after settlement* (OPB, Aug. 16, 2024)

<https://www.opb.org/article/2024/08/16/nw-natural-utilities-natural-gas-rate-hikes-price-increase/>. NW Natural’s most recently requested an 18% rate increase, with the PUC reduced to 4.7%. See Monica Samayoa, *Oregon regulators approve natural gas rate hikes for some, cuts for others* (OPB, Oct. 30, 2024), <https://www.opb.org/article/2024/10/30/oregon-regulators-approve-natural-gas-rate-hikes-for-some/>.

NW Natural's Biomethane Investments Are Especially Flawed

Low Quality Biomethane Sources

As President of NW Natural Renewables Anna Chittum acknowledged to ProPublica, evaluating the GHG intensity of biomethane sources is an inexact science.⁵⁸ What we can be sure about is that some forms of biomethane are categorically poorer than others due to the energy required to purify or “upgrade” the biogas to utility standards.⁵⁹ The kinds of biogas – essentially slaughterhouse and landfill waste – are typically regarded as among the poorest (i.e. most emissions-intensive) biomethane sources.⁶⁰ This is reflected in the positive emissions intensity values NW Natural submitted to the OPUC for Lexington and Dakota City. Because of this, even though these two investments represented 0.2% of NW Natural's 2022 gas supply, they reduced NW Natural's GHG emissions by an even more miniscule amount: approximately 0.094%.⁶¹ As discussed earlier in this report, NW Natural is increasing its supply of biomethane through purchasing even lower quality and higher-emitting sources, resulting in vastly diminished climate benefits as biomethane supply grows. Because of this, the reported 3.35% of NW Natural's gas supply containing biomethane represents, at most, a 2% reduction in the utility's GHG emissions compared with conventional natural gas.⁶² While Oregon's Clean Fuels Program accounts for the calculated GHG intensity of RNG sources participating in that program, Oregon's signature climate law – the Climate Protection Program – does not.

“Offshoring” Utility Gas Emissions

NW Natural's practice of investing in RNG facilities in far away states makes it dubious, and at a minimum difficult to ascertain, if any real-world emissions reductions are occurring even within the utility sector. Under Oregon's Climate Protection Program, utilities are subject to emissions reduction requirements. Nebraska imposes no such requirements on its gas utilities. This is likely why there is a market for NW Natural to sell its biomethane to Nebraska gas utilities, while retaining the RTC for its own emissions accounting purposes. Any nominal emissions reductions achieved by NW Natural within Oregon's regulatory jurisdiction therefore may be wiped out by the growth

⁵⁸ Funk, *supra* note 3 (“In an interview, Chittum noted that there is no universal standard to measure how much a renewable natural gas project actually helps the climate. By the standards followed by some state programs, including in California, she said the Tyson projects could possibly be certified as carbon-zero, or even carbon-negative. But it's expensive to hire someone to do a full accounting, and Oregon doesn't require NW Natural to prove any benefit — so ‘we just haven't spent ... the third-party dollars to go calculate all of that,’ she said.”). That the President of NW Natural Renewables lacks confidence in the emissions intensity values the company's SB 98 investments submitted to regulators is a damning admission in itself. Regardless, Chittum's claim that the Tyson projects could have been certified as carbon-neutral or -negative is likely implausible, given the range of emission intensities normally calculated for wastewater sources under California's Low Carbon Fuel Standard. See *infra* note 52.

⁵⁹ See U.S. Environmental Protection Agency, “Renewable Natural Gas from Agricultural-Based AD/Biogas Systems” <https://www.epa.gov/agstar/renewable-natural-gas-agricultural-based-adbiogas-systems>.

⁶⁰ See, e.g., Tom Syrs et al., *Renewable Natural Gas as a Climate Strategy: Guidance for State Policymakers*, (World Resources Institute, Dec. 2020), 6 (Figure 1-1), <https://files.wri.org/d8/s3fs-public/renewable-natural-gas-climate-strategy.pdf> (showing that landfill and wastewater sources are categorically the two most GHG emissions-intensive sources of biomethane). See also Jeremy Martin, *Something Stinks: California Must End Manure Biomethane Accounting Gimmicks in its Low Carbon Fuel Standard* (World Resources Institute, Feb. 15, 2024), <https://blog.ucsusa.org/jeremy-martin/something-stinks-california-must-end-manure-biomethane-accounting-gimmicks-in-its-low-carbon-fuel-standard/> (critiquing the technical assumptions underpinning negative emissions intensity values calculated under California's Low Carbon Fuel Standard).

⁶¹ Calculations produced using the production volume and GHG intensity figures submitted by NW Natural to the PUC. See *supra* notes 12-15, 20-23.

⁶² *Supra* notes 35-37. This is significantly less of an emissions reduction than was achieved through unintentional drops in gas demand in 2025, where NW Natural's sales volumes decreased by 6% compared with 2024. See NW Natural Holdings, *Form 10-K* (Feb. 27, 2026), 43, <https://ir.nwnaturalholdings.com/financials/sec-filings/default.aspx>.

in other utilities' gas emissions in other states, activities that are enabled in part by NW Natural.⁶³Regulators Are Increasingly Scrutinizing Investments

In light of these issues, Public Utility Commissions across the nation are increasingly skeptical about gas utility investments into biomethane as a decarbonization strategy. For example, in one of the strongest rebukes of biomethane to date, the Massachusetts Department of Public Utilities rejected arguments from the gas industry in favor of biomethane, citing the "uncertain status of RNG as a zero-emissions fuel," and instead ordered utilities to investigate non-gas alternatives to decarbonize in light of the state's 2050 net-zero emissions goal.⁶⁴

Here in Oregon, the OPUC similarly voiced uncertainty about the viability of biomethane as a decarbonization strategy in their 2023 Natural Gas Fact Finding Report, which was initiated in response to former Governor Brown's Executive Order on Climate, 20-04.⁶⁵ In the wake of the publication of their report, the OPUC declined to acknowledge *all three* gas utilities' integrated resource plans (IRPs), citing overreliance on alternative fuels such as biomethane.⁶⁶ In the case of NW Natural 2022 IRP in particular, the OPUC flagged the problematic way in which the utility was interpreting the voluntary SB 98 targets as if they were mandatory in order to justify their reliance on biomethane procurement. Specifically, although NW Natural's modeling reflected biomethane investments as a more expensive strategy than other available emissions-reduction opportunities, the OPUC found that NW Natural "forc[ed] selection of RNG up to the SB 98 targets, rather than evaluating the cost and risk of resource alternatives" for emissions reductions.⁶⁷

In an April 30, 2026 decision, the OPUC acknowledged NW Natural's 2025 IRP "with conditions." Despite this acknowledgement, the OPUC remained skeptical of NW Natural's reliance on biomethane. Specifically, the OPUC found that NW Natural's "preferred resource strategy," which relies heavily in the short term on RTCs from biomethane sources, would cost ratepayers \$250 million more by 2030, and \$4 billion more over the planning horizon, than a strategy that pursues hybrid electrification.⁶⁸ The OPUC further found that Community Climate Investments – Oregon's Climate Protection Program's version of emissions offsets – were a significantly cheaper decarbonization option than RNG/RTCs.⁶⁹

NW Natural's Investments Outside of the SB 98 Program are Also Raising Concerns

Beyond investments made by NW Natural under SB 98, the utility has continued to mislead customers about the potential for biomethane, asking them to voluntarily increase their monthly bills to "offset" their emissions to fund more biomethane facilities, including some in Oregon. Filings in a class action lawsuit against NW Natural allege that many of the CAFOs that NW Natural has invested in are actually being incentivized to increase the amount of

⁶³ In recent years, NW Natural has taken advantage of lax gas regulations in other states to expand their holdings, having acquired two Texas gas utilities in November of 2024 and June of 2025. NW Natural has cited the "Constructive regulatory and policy environment" and "policy support for long-term natural gas utility growth" in shareholder presentations as justifications for those investments. NW Natural Holdings, *NW Natural Holdings SiEnergy Acquisition* (Nov. 19, 2024), [link](#); NW Natural Holdings, *Investor Presentation* (May 2025), [link](#).

⁶⁴ Massachusetts Department of Public Utilities, *Department of Public Utilities Issues Order 20-80* (Dec. 6, 2023), <https://www.mass.gov/news/departments-of-public-utilities-issues-order-20-80>.

⁶⁵ Oregon Public Utility Commission, *Natural Gas Fact Finding: Final Report* (PUC Docket No. UM 2178 Jan. 31, 2023), <https://www.oregon.gov/puc/forms/Forms%20and%20Reports/NGFF-UM2178-Report.pdf>; Oregon Office of the Governor, *Executive Order 20-04* (Mar. 10, 2020), https://www.oregon.gov/gov/eo/eo_20-04.pdf.

⁶⁶ Alex Baumhardt, *All gas companies in Oregon fail to gain approval for plans on meeting state's climate goals* (Oregon Capital Chronicle, Mar. 15, 2024), <https://oregoncapitalchronicle.com/2024/03/15/public-utilities-commission-rejects-long-term-climate-plans-of-every-natural-gas-company-in-oregon/>.

⁶⁷ Oregon Public Utilities Commission, *In the Matter of NW Natural Company 2022 Integrated Resource Plan: Order No. 23-281* (PUC Docket No. LC 79, Aug. 2, 2023), <https://apps.puc.state.or.us/orders/2023ords/23-281.pdf>.

⁶⁸ Oregon Public Utility Commission, *Disposition: 2025 Integrated Resource Plan Acknowledged with Conditions: Order No. 26-150* (PUC Docket No. LC 86, Apr. 30, 2026) 12, <https://apps.puc.state.or.us/orders/2026ords/26-150.pdf>.

⁶⁹ *Id.*, 18.

methane being generated at these facilities, both by increasing the number of animals held as well as changing manure storage and disposal practices to maximize methane emissions. For example, the Threemile Canyon Farm CAFO, the single largest dairy in Oregon, used solid-liquid separation to treat manure and reduce methane pollution until 2009.⁷⁰ Yet, that year, the facility installed a methane digester and simultaneously changed its practices to maximize methane generation.⁷¹

The filings also detail the significant leakages of methane from digester facilities at these CAFOs. In one instance, Threemile Canyon was documented by nonprofit Carbon Mapper to be leaking over 399 kilograms of methane an hour (Carbon Mapper identifies a super polluter as leaking 10 kilograms an hour), with one plume of methane coming directly from the methane digester funded by NW Natural. 399 kilograms has the global warming equivalent of 11.2 metric tons of carbon dioxide, and one hour of those emissions is the equivalent of 2.7 gas vehicles driven for one year. If that plume of methane had continued at that rate for just 24 hours, it would have generated pollution equivalent to 268 metric tons of carbon dioxide, or 63.8 gas vehicles driven for one year.⁷²

It is safe to assume leaks associated with biomethane facilities like the one documented at Threemile Canyon are far more common than is reported. But even the data that we do have demonstrates the significant emissions that biomethane production can generate.

⁷⁰ Complaint, *Blumm v. Northwest Natural Gas Company*, No. 24CV48490 (Mult. Co. Cir. Ct., Oct. 9, 2024), <https://farmstand.org/wp-content/uploads/2024/10/Blumm-v.-Northwest-Natural-File-Copy.pdf>

⁷¹ Tracy Loew, *Manure is big business at Oregon's largest dairy with conversion to natural gas* (Statesman Journal, Mar. 31, 2019), <https://www.statesmanjournal.com/story/tech/science/environment/2019/03/31/oregon-threemile-canyon-farms-dairy-natural-gas-manure/3247197002/>.

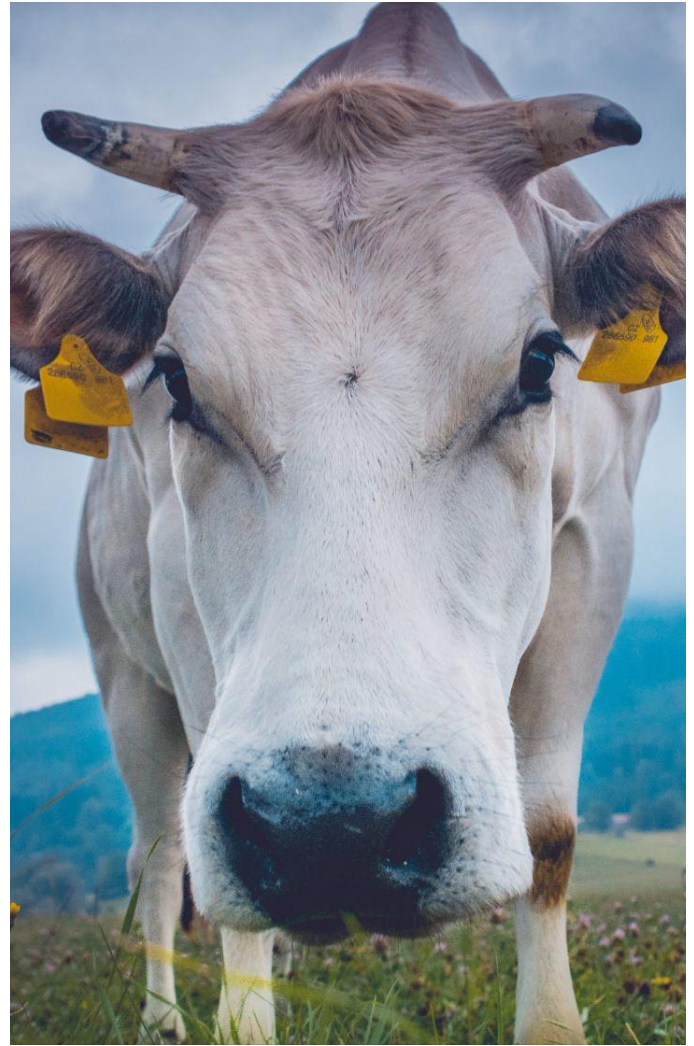
⁷² U.S. Environmental Protection Agency, "Greenhouse Gas Equivalencies Calculator," <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.

Conclusion

Relying on biomethane to reduce building emissions is extremely expensive and not technically feasible,⁷³ and there is a growing movement of local communities across the nation fighting against the polluting CAFOs from which this gas is being sourced.⁷⁴

It is untenable for Oregon ratepayer dollars to be spent propping up industrial animal agriculture to purchase an unfeasible “alternative” to fossil fuels sourced from sacrifice zones halfway across the country. Oregonians want real solutions to the climate crisis, and there is a clear alternative to the fossil fuel industry’s profit-driven schemes: rapid electrification of homes and buildings with high efficiency heat pumps for space and water heating.

It is clear that, contrary to the finding in ORS 757.390 that “renewable natural gas provides benefits to natural gas utility customers and to the public” as established by SB 98, biomethane is actually harming both natural gas utility customers and the public. In light of the findings of this report, it is imperative for the legislature to repeal SB 98, establish greater regulation on all utility investments in biomethane, and work with community organizations to craft laws that protect ratepayers and reduce emissions without sacrificing low-income and BIPOC communities in far away places. Additionally, it is critical that the Oregon Public Utility Commission reject proposals to charge ratepayers for these misguided investments, and to take a critical eye to future proposed biomethane projects by Oregon utilities.



⁷³ Steven Nadel, *Impact of Electrification and Decarbonization on Gas Distribution Costs* (American Council for an Energy Efficient Economy, Jun. 2023), <https://www.aceee.org/research-report/u2302>; Adam Kotin et al., *Diversified Strategies for Reducing Methane Emissions from Dairy Operations* (California Climate and Agriculture Network, Oct. 2015), <https://calclimateag.org/wp-content/uploads/2015/11/Diversified-Strategies-for-Methane-in-Dairies-Oct.-2015.pdf>.

⁷⁴ Food and Water Watch, *The Urgent Case for a Ban On Factory Farms*, (May 2018) https://www.foodandwaterwatch.org/wp-content/uploads/2021/03/rpt_1805_urgent_case_to_ban_factory_farms-final-final-web.pdf



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