

Fueling Homes and Businesses in Eugene

Six facts about the role of the gas system in a carbon-neutral future

NW Natural is proud to be serving customers in the Pacific Northwest since 1859. More than 2.5 million people depend on us every day to provide an essential service: clean, reliable and affordable energy.



Recent polling shows that Eugene voters want a decarbonized pipeline—not gas bans—for our clean energy future.¹

- 70% of Eugene voters oppose a ban on new natural gas hookups in all homes and buildings.
 Moreover, most voters (53%) go further and are "strongly opposed" to a ban.
- 75% of Eugene voters agree that families and businesses should have a choice of energy options to meet their needs and not have their choices mandated by city councilors.
- 78% of Eugene voters support city council encouraging the use of renewable natural gas.



A large amount of energy for a modest footprint.

- During the peak-demand periods (those coldest days), the direct-use natural gas system in the Northwest delivers nearly twice as much energy as the electric system.
- On those days, NW Natural meets 90% of the energy needs of our residential space and water heat customers.
- Roughly 2 out of 3 Oregonians rely on natural gas for home heating, yet this use accounts for about 4% of Oregon's annual greenhouse gas emissions.²

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Survey conducted by DHM Research for NW Natural



A diversified system is a reliable system.

- The electric and gas systems depend on each other to serve communities like Eugene—and each system provides certain benefits that together offer greater reliability and resiliency.
- Homes and businesses can rely on natural gas generators and many gas fireplaces, cooktops, and water heaters even when the power is out.
- The Northwest power grid is already facing serious capacity limitations.³ Forced electrification of homes and businesses would further worsen the situation and require costly new electricity generation and transmission lines.

OREGON GREENHOUSE GAS EMISSIONS BY SECTOR

 36%
 29%
 22%
 13%

 TRANSPORTATION
 ELECTRICITY
 OTHER (other fuels & waste)
 NATURAL GAS

 Source: Oregon DEQ In-Boundary GHG Inventory preliminary 2019 data.
 NW Natural Residential and Commercial Customer Use → 6%

¹ At the request of NW Natural, DHM Research conducted an independent survey from November 6-14, 2021, with voters in NW Natural's service territory.

Online at: https://www.nwnatural.com/about-us/the-company/newsroom/2022-renewable-energy-survey

² Oregon DEQ In-Boundary GHG Inventory preliminary 2019 data, https://www.oregon.gov/deq/aq/programs/Pages/GHG-Inventory.aspx

³ Northwest Power and Conservation Council, "Adding Renewable Energy to the Power Supply Will Challenge Planners to Maintain Reliability." Online at: https://www.nwcouncil.org/news/adding-renewable-energy-power-supply-will-challenge-planners-maintain-reliability and EWEB Electrification Impact Analysis. Online at: https://www.eweb.org/about-us/news/eweb-is-exploring-the-impacts-of-widespread-electrification-in-our-community

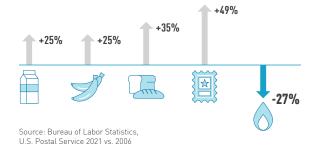


Natural gas: Today's best energy option to meet our region's biggest needs.

- There is an inconvenient fact about forced electrification—namely, about half of Oregon's electricity is generated by coal and natural gas.⁴
- Electric utilities in Oregon use about as much natural gas to generate electricity as all the gas utilities combined—and even more will be needed for reliable power when the coal plants are retired.
 So, the Northwest will either be using natural gas directly and efficiently in homes and businesses or even more of it in less efficient power plants to serve the coldest winter days.
- Eugene is in a unique position compared to most communities because the city's electric utility is primarily reliant on hydropower from the Bonneville Power Administration (BPA). But energy systems are regional, and the electric and gas systems depend on each other to serve communities.
- When it comes to affordability, no energy option available today can compete with natural gas.
 A high efficiency furnace usually costs less than half as much to heat a home or business than an electric or oil furnace and is usually less costly to operate than a high efficiency electric heat pump.
- NW Natural customers on average are paying less for natural gas than they did 15 years ago.

GAS BILLS REMAIN AFFORDABLE

NW Natural customers are paying nearly 30% less for their bills today than they did 15 years ago





NW Natural is evolving its supply to deliver and store renewables.

- Just as solar and wind projects add renewable energy to overhead wires, we can deliver renewable natural gas and clean hydrogen through our pipelines.
- We have already signed agreements with options to purchase or develop renewable natural gas totaling 3% of NW Natural's annual sales volume in Oregon —with plans to expand rapidly. For context, the U.S. is at about 11% for wind and solar generation.⁵
- We can also use our existing 20 billion cubic feet of underground energy storage for renewable molecules; to replicate that storage with an electric battery would cost about \$2 trillion.⁶
- By using NW Natural's system already in place—
 one of the tightest, newest pipeline networks in
 the nation—we can help Eugene reach climate
 goals more affordably, without sacrificing reliability.



Cooking with natural gas is strongly preferred for a reason.

- 8 in 10 recent and prospective homebuyers prefer natural gas over electricity for cooking and heating, and feel it is an important feature when looking for their "ideal" single-family home.⁷
- Some advocating for forced electrification of cooking suggest there's an indoor air quality benefit to doing so. However, peer-reviewed health studies show proper ventilation for gas and electric stoves is key to indoor air quality while cooking; this is even true for electric toasters, which are one of the worst sources of particulate matter in home kitchens.
- We recommend checkups and periodic maintenance of any appliance in your home, and we offer annual gas equipment inspections at no charge by visiting nwnatural.com.



Learn more at engagenwnatural.com



- 4 Oregon Department of Energy, Electricity Mix in Oregon. Online at: https://www.oregon.gov/energy/energy-oregon/Pages/Electricity-Mix-in-Oregon.aspx
- 5 This figure was developed based on the National Renewable Energy Laboratory's Cost Projections for Utility-Scale Battery Storage report (2019), as well as hydroelectric and battery generation data reported in the U.S. Energy Information Administration's Power Plant Operations Report (EIA-923).
- 6 At the request of NW Natural, Escalent conducted the independent study in 2020, February through April, and again in September, surveying recent and prospective homebuyers in Portland and Salem, Oregon, and Vancouver, Washington. Online at: https://www.nwnatural.com/get-natural-gas/homebuyer-energy-preference