



Leading with integrity.
Caring for people.
Innovating for the future.

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To Our Stakeholders

NW Natural Holdings experienced a dynamic year in 2022. Across our growing family of companies, we stepped up to deliver on our commitment to growing more sustainable, serving people and leading the way to a resilient, lower-carbon energy system that benefits everyone in our region.

At our natural gas utility, we exceeded our targeted pace for cutting carbon emissions, formed a partnership to generate hydrogen at our facilities, and completed our first project to produce renewable natural gas (RNG) on behalf of customers. Our NW Natural Water subsidiary invested in safety, reliability and environmental improvements while nearly doubling the company's customer base. Construction began on two RNG facilities we invested in through NW Natural Renewables, the competitive business we launched in 2021 to supply lower-carbon fuels to the utility, commercial, industrial and transportation sectors. And every day, in the face of tumultuous world events and economywide inflation, we continued to provide safe, reliable, and affordable utility services to our customers.

Our core values of integrity, safety, caring, service ethic, and environmental stewardship guided our actions in 2022, as they always have. Integrity is our foundation, and it informs how we serve our customers, operate our business, treat our colleagues, and engage with the community. I am particularly proud that NW Natural Holdings was recognized as one of Ethisphere® Institute's 2022 World's Most Ethical Companies®—an honor we received again in 2023—as the recognition belongs to each of the 1,200 employees responsible for this company's success.

As a key employer and service provider in our region, we put people at the center of everything we do. Safeguarding the health and well-being of our communities and our workforce is paramount, and I am pleased to report that in 2022 we experienced the lowest number of workplace injuries in nearly two decades. We looked for ways to assist our low-income community members, a commitment that led to the creation of our new bill discount program for low-income households in 2022. We also worked to foster a diverse, inclusive company culture where everyone can thrive and grow. We increased the number of employee resource groups that champion underrepresented employees, and we created a Community and Equity Advisory Group of representatives from outside organizations to bring an equity and environmental justice lens to our energy and operational planning.

The energy industry and the world around us are changing at a pace perhaps never experienced before, and we see unprecedented opportunities for growth, innovation and reimagining our role as a trusted provider of essential services. This report provides a view of how we're meeting today's challenges and building on our strengths to continue serving our communities into the future. We've sustained a thriving business for over 160 years by continually evolving, and we're not slowing down. I'm grateful for our dedicated people, whose steadfast focus on service, innovation and environmental stewardship allows us to meet this moment.



David H. Anderson
NW Natural Holdings CEO



Awards and Certifications



Ethisphere® Institute's 2022 and 2023
World's Most Ethical Companies®



2022 Escalent
Environmental Champion



2022 Escalent Most
Trusted Utility Brand



50/50 Women on Boards – Highest
distinction for Gender Balanced board



Gold Shovel Standard* certification for
damage prevention safety management

*As of 2023, Gold Shovel Standard is now Damage Prevention Institute



"Ethics matter. Organizations that commit to business integrity through robust programs and practices not only elevate standards and expectations for all, but also have better long-term performance. Congratulations to NW Natural Holdings for earning a place in the World's Most Ethical Companies community."

— Ethisphere CEO Erica Salmon Byrne

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"Ethisphere" names and marks are
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2022 Highlights



SUSTAINABILITY

Exceeded our Low Carbon Pathway target for cutting carbon emissions 30% by 2035¹

Led the industry with **one of the lowest ratios of leaks** per mile of distribution pipeline

Completed our first renewable natural gas project and delivered environmental benefits of RNG to our customers

¹ This is an emissions savings goal equivalent to 30% of the carbon emissions from our customers' gas use and company operations in 2015.



SAFETY

Continued to operate **one of the tightest, most up-to-date systems** in the nation

Lowest number of workplace injuries in nearly two decades for the second year in a row



CUSTOMERS & COMMUNITIES

Ranked #2 in the West by residential customers in J.D. Power survey for the 19th year running

Contributed nearly \$1 million to organizations **supporting youth and family resiliency, environmental stewardship, health and human services, and arts and culture**



EMPLOYEES

86% of surveyed employees say they are proud to work for NW Natural



DIVERSITY, EQUITY & INCLUSION

45% of NW Natural Holdings' board of directors identify as women, including the Chair of the Board

Launched a new Employee Resource Group, the Neurodiversity Network, that contributes to an equitable, inclusive workplace culture and provides leaders with important feedback

Created a Community and Equity Advisory Group to help bring an equity and environmental justice lens to our energy and operational planning



WATER

Invested in critical infrastructure, cybersecurity, safety and customer support while nearly doubling our customer base



SUSTAINABLE FINANCING

Contributed to a sustainable economy, allocating an amount equivalent to the \$129 million raised through our sustainable financing framework to finance or refinance renewable energy, energy efficiency, green buildings, and supplier diversity initiatives



RENEWABLES

Grew a competitive renewable energy business to provide renewable natural gas to the utility, commercial, industrial and transportation sectors



GOVERNANCE

Recognized by Ethisphere® as one of the 2022 and 2023 World's Most Ethical Companies®

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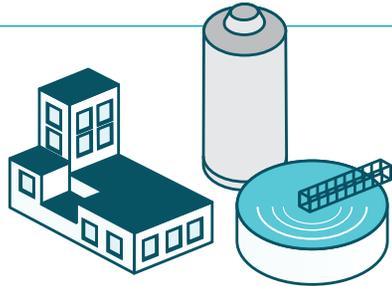
About NW Natural Holdings

NW Natural Holdings, based in Portland, Oregon, owns NW Natural Gas Company, NW Natural Water Company, NW Natural Renewables Holdings and other business interests. In 2022 we entered a new stage of growth while leading our industry in environmental stewardship efforts and delivering essential energy and services safely and reliably with great care.



OVER 160 YEARS

doing business as a respected energy provider in the Pacific Northwest



MORE THAN 150,000

people in the Pacific Northwest, Arizona, and Texas depend on us for clean, safe water and wastewater utility services



APPROXIMATELY 2 MILLION PEOPLE

in more than 140 communities depend on us to deliver the energy and essential services they need to heat their homes, cook their meals and keep their businesses running



795,000 METERS

providing energy in Oregon and Southwest Washington



1,200 EMPLOYEES

serving customers safely and reliably every day

KEY INITIATIVES



Aggressively pursuing a renewable, **carbon-neutral future** for our gas utility



Expanding and investing in our **water and wastewater** utility business



Investing in **renewable energy** and the transition to a decarbonized future for a variety of sectors

Our Mission

We provide safe, reliable, and affordable utility services and renewable energy in a sustainable way to better the lives of the communities we serve.

Our Vision

Lead in service excellence, innovation and environmental stewardship by harnessing our passion for customers.

Our Values

Since 1859, NW Natural Holdings has been a respected energy provider in the Pacific Northwest. We have maintained this reputation by keeping our five core values at the center of everything we do.



Integrity

We will display integrity in everything we do by being honest, ethical and true to our word. We will always choose to do the right thing, even when it is the harder path.



Safety

Safety is paramount in all aspects of our operations, infrastructure and workplaces. We are committed to superior training and protective, healthy work practices to ensure we all return home safely. We strive to educate our employees, partners, customers, and our communities about safety.



Caring

We are committed to respecting and caring about each other. We value teamwork, collaboration, and strong individual contributions. We believe a diverse, equitable and inclusive culture, and involvement in the communities we serve, is essential to our collective success.



Service Ethic

We are driven by a desire to serve our customers and each other and go the extra mile to solve problems. We take pride in our service excellence.



Environmental Stewardship

We are committed to a decarbonized and more sustainable future through energy efficiency, water conservation, and expanding the supply of renewable resources we provide.

Safety & Reliability

Safe, reliable delivery of natural gas is our greatest responsibility to our customers, our employees, and the communities we serve. Safety guides everything we do.



2022 FEDERAL REPORTS

ZERO

- Reportable pipeline incidents
- Corrective action orders
- Notices of probable violation

Safety Highlights

Consistently low damages

- Received Gold Shovel Standard certification in 2022 for the second year running for comprehensive damage-prevention actions
- Continued to drive down our consistently low damage rate to the lowest level in our history



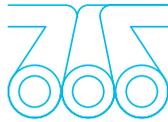
NEARLY
70%



OF TRANSMISSION PIPELINE INSPECTED

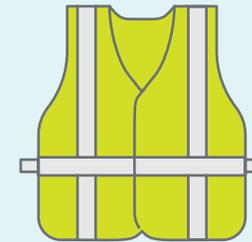
- 2.5 times the rate required by regulations
- 86% of inspections performed through inline assessment

OUR MODERN SYSTEM



- No cast iron pipes since 2000, no bare steel pipes since 2015
- Leading the industry with one of the lowest ratios of leaks per 100 miles of pipeline in 2022, a fraction of the industry average

LOWEST NUMBER OF WORKPLACE INJURIES SINCE 2004



ZERO 
reportable information
security breaches

Our Tight, Modern System

One of the tightest, most modern natural gas distribution systems in the nation

In the mid-1980s, we worked with our public utility commissions in Oregon and Washington state to proactively create a pipeline replacement program. In 2000 we became one of the first companies in the country to eliminate cast iron pipes, and by 2015 we replaced all cast iron and bare steel pipe. We believe we are the first pure-play local distribution company to completely remove these legacy pipelines. Among U.S. natural gas utilities, NW Natural had one of the lowest ratios of leaks per mile of pipe in 2022.¹

Having eliminated vintage materials from our distribution system years ago, we're able to invest more of our resources in the next wave of innovations, including renewable energy and other environmental advances.

Continuous inspection and monitoring

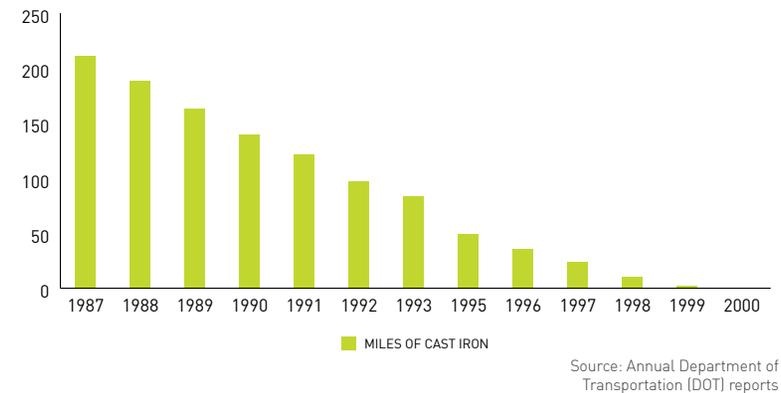
We vigilantly manage our 736 miles of transmission pipelines and approximately 14,300 miles of distribution pipeline. That means proactive monitoring, preventative maintenance, and prompt identification and repair of potential issues. To help prevent safety issues, our employees performed approximately 190,000 proactive field visits in 2022. We operate a 24/7 emergency hotline that enables us to promptly dispatch responders when there's a problem, and our NW Natural safety app connects customers to our 24-hour emergency line with one click. On average, we respond to damage and odor calls across our service territory in about 30 minutes or less.

In 2022, we performed safety inspections on our transmission system at about 2.5 times the rate required by federal and state regulations.

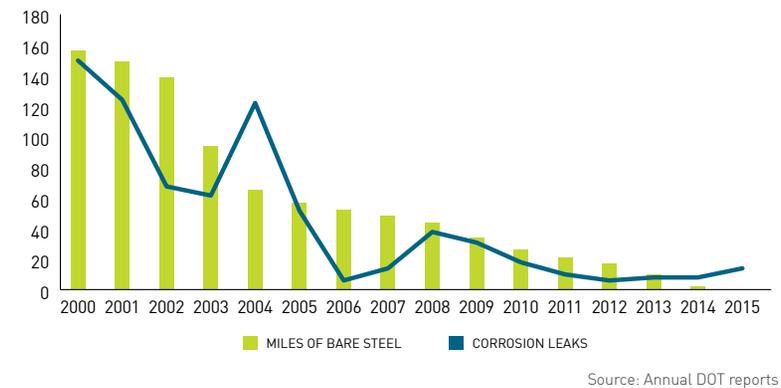
We inspect our transmission system with a combination of direct assessments and technologically advanced inline inspection. At the end of 2022, we had inspected nearly 70% of our transmission system, primarily through inline inspection—a superior method, as it can assess pipeline integrity from inside the pipe.

¹ Based on DOT Annual Report data for natural gas operators reporting more than 7,000 miles of distribution main

Cast Iron Pipe Replacement Completed in 2000



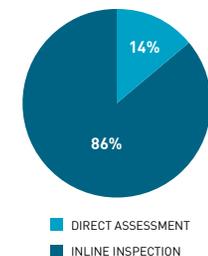
Bare Steel Pipe Replacement Completed in 2015



Exceeded Transmission Inspection Requirements
MILES INSPECTED VS. REQUIRED



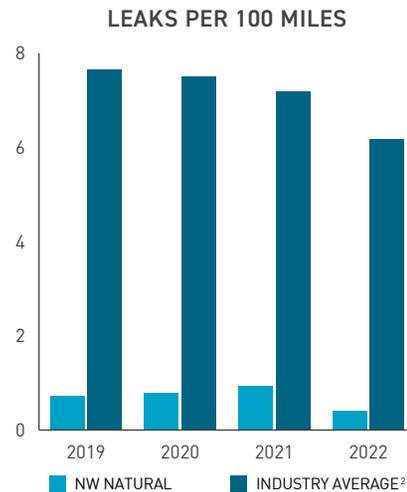
Majority of Transmission Pipeline Inspected Using Inline Approach
INSPECT USING MULTIPLE APPROACHES





NW Natural consistently leads the industry in the lowest number of leaks per mile of distribution pipeline

We strive to perform a leak survey of each gas main at least every five years, and survey 20% of mains every year. We also strive to perform leakage and atmospheric corrosion surveys every three years on residential service lines. Raising the bar on the federal requirement to perform these inspections annually in business districts and high-occupancy buildings, we have greatly expanded our classification of business districts for 2023. We use Supervisory Control and Data Acquisition (SCADA) and telemetry to monitor the system in real time and transmit data from remote sources. This powerful technology makes it possible to quickly detect leaks even in remote locations.



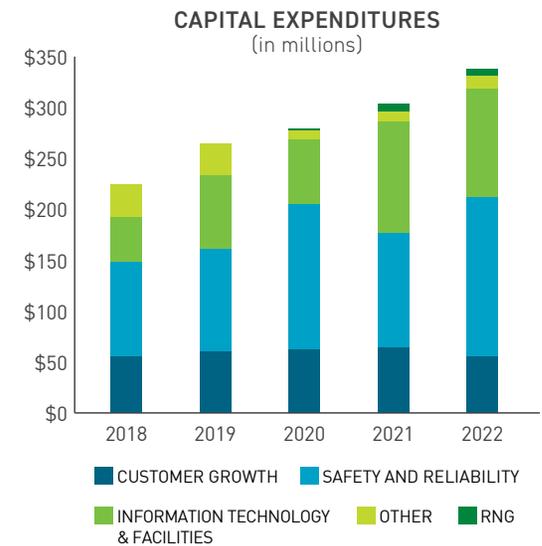
² Based on DOT Annual Report data for natural gas operators reporting more than 7,000 miles of distribution main

³ Cap-ex is on an accrual basis and includes cloud-based software

Investing in safety improvements

We're continually investing in the safety and reliability of our natural gas infrastructure. In 2022 NW Natural invested \$338 million³ to complete a range of projects, including system reinforcements to improve reliability, pipeline retrofitting for inline inspection, and improvements to our underground storage and Liquefied Natural Gas (LNG) facilities. We also completed a significant multiyear project to upgrade our enterprise resource planning information system, and we invested heavily in cybersecurity technology to protect our critical systems and customer data. These improvements are designed to enable us to continue providing our customers with safe, dependable energy delivery services and strengthen our foundation for contributing to a renewable energy future.

Total investment in capital expenditures is calculated on an accrual basis and includes cloud-based software.





Troubleshooting and teamwork to keep the system safe

The eight members of the Transmission Maintenance Group are responsible for keeping the high-pressure and transmission pipeline system safe, reliable and in good working order. They patrol the pipelines in NW Natural's service territory for leaks, indications of landslides, and other changes that could compromise pipeline integrity. They also perform strength testing of high-pressure pipelines and run devices that clean pipelines and inspect the integrity of the pipeline. And they do the critical work of "tapping and plugging" —isolating sections of pipeline during maintenance and repair to create safe work zones without shutting down the system or venting emissions into the atmosphere. It's challenging work, grounded in safety protocols. "We all trust each other, which is huge," said longtime team member Darin Yost. "Our main job is to make sure everybody stays safe and goes home at night."

Reliability and Resilience

Careful planning for reliable delivery

Approximately 2 million people depend on us to deliver the energy and essential services they need to heat their homes, cook their meals and keep their businesses running. NW Natural has developed a risk-based method for determining how to provide this energy to customers without interruption, both now and over the long term, even when demand is at its highest. This is done through a process of evaluating different energy-demand scenarios and resource-acquisition strategies, as outlined in our [Integrated Resource Plan \(IRP\)](#).

We conduct this involved analytical process to help maintain adequate gas supply to meet customer needs every day across the year (energy planning) and during the coldest days we might experience (system capacity planning). To help lower costs for our customers and mitigate the risk of interruptions to our natural gas supply, we:

- Purchase natural gas from geographically varied sources
- Maintain a diversified portfolio of supply contracts
- Own and contract with natural gas storage facilities

Our expertise in resource and energy planning will continue to be essential as we transition to renewable fuels for the pipeline.

NW Natural has abundant storage capacity in or near our service area—a unique and valuable resource for reliable energy delivery.

We expect to meet about 55% of our projected peak day energy requirement with gas from storage in or near our service area. Underground gas stored at our facility near Mist, Oregon holds sufficient capacity to supply natural gas to the Portland metro area for approximately one month during an average winter.

Our resilient infrastructure

Maintaining the resilience of the US energy system is imperative. Compared with above-ground infrastructure, the underground gas delivery system is [less vulnerable](#) to disruptive events from extreme weather such as hurricanes and snowstorms. Our modern pipes are also designed to withstand stress from ground movement associated with earthquakes, landslides and other natural disasters.⁴ A [study](#) by Portland State University's Center for Public Service suggests the natural gas system can be a crucial resource in the event of a major disaster that disrupts power to the Pacific Northwest.

Resilient operations

We take measures so that in the event of a disaster we can continue to operate critical business functions, including gas control and emergency response. We build and upgrade our operations facilities to function in the event of a disaster so we can continue to operate these critical business activities.

- Our Portland headquarters, opened in March 2020, is also designed to remain operational after an earthquake. We completed construction of another NW Natural building that is designed to be operational after a large-scale seismic event. The Vancouver Resource Center in Southwest Washington is built to [Level 4 seismic standards](#), which apply to structures that are most critical to resilience.



CUSTOMERS RELIED ON NW NATURAL WHEN TEMPERATURES DROPPED—AND WE DELIVERED

Reliability means peak planning and ensuring we have sufficient resources to meet all our customers' needs during the coldest weather our service territory can experience. That's exactly what we were called on to do during the 2022-2023 winter heating season, which placed record demands on our gas system. Time after time our infrastructure and our employees met those demands, and natural gas delivery continued uninterrupted all winter long—even through record-breaking temperatures, ice, and wind on Dec. 22, 2022, when we delivered an unprecedented 41 million cubic feet of gas in a single hour. Our storage facilities and overall hedged position worked to mitigate the amount of gas purchased on the spot market and helped to minimize the impact on customers' bills. Meeting the moment in December was a result of disciplined investments in the system over many decades.

⁴ 2019 study by consulting firm ICF

- We continued to upgrade our facilities in 2022 as part of the company's Long-Range Facilities Strategic Plan for building resilient, energy-efficient structures. New resource centers in Vancouver, Washington and Lincoln City, Oregon were built to the same Level 4 seismic standards we adhere to for new construction of all critical facilities.
- NW Natural uses FEMA's [National Incident Management System](#) and [Incident Command System](#) (ICS) to manage emergency situations that could disrupt our operations. The ICS is designed to address any hazard, whether it be a natural disaster, a pandemic, a technology issue, a cybersecurity incident, or an event such as major damage caused by third-party excavation.



Installing excess flow valves to extend system safety

Excess flow valves (EFVs) can automatically stop the flow of natural gas to a home or business if the service line is damaged by a seismic disturbance or other catastrophic event. We're installing EFVs on new service lines and planning to retrofit EFVs on existing service lines meeting certain specifications. To date, we've installed more than 295,000 EFVs on about 40% of the service lines in our system, which compares to an industry average of 27%.⁵



Taking system safety to the next level

NW Natural leverages new technologies and best practices to keep our employees, our system, and the public safe.

- We're active in the American Gas Association (AGA) Best Practices Program, a voluntary peer review forum for local natural gas utilities across the US to share information on safety and reliability and support safety management efforts at the industry level.
- In 2022 we were a partner company in the U.S. Environmental Protection Agency's (EPA) Natural Gas STAR Program.⁶ EPA launched the voluntary partnership with natural gas operators in 1993 to achieve important reductions in methane emissions.⁷
- We're taking our safety program to the next level with our Pipeline Safety Management System (PSMS), a voluntary, holistic framework for promoting safety awareness, vigilance, and cooperation throughout the company. Safety management systems have been shown in many industries to dramatically decrease safety incidents.⁸

⁵ Based on 2022 Pipeline and Hazardous Materials Safety Administration (PHMSA) data for natural gas distribution companies with more than 400,000 service lines.

⁶ EPA transitioned the Natural Gas STAR Partnership Program in 2022 after 30 years, but the agency continues to partner with operators making ambitious commitments to methane emission mitigation and transparency through the [Methane Challenge Partnership](#). NW Natural is a founding partner of the Methane Challenge.

⁷ Distribution partners cumulatively reduced methane emissions by 18.5 million MTCO₂e over the life of the program with practices such as leak detection and repairs and preventing gas loss from dig-ins.

⁸ For example, the U.S. Federal Aviation Administration (FAA) requires most U.S. commercial airlines to have Safety Management Systems (SMS) in place.



Continuously improving pipeline safety

Our commitment to safety extends beyond adhering to regulatory mandates. Our Pipeline Safety Management System (PSMS) is an entirely voluntary program that provides a holistic framework for managing risk and promoting continuous improvement of safety practices. PSMS engages all employees, from frontline workers to executives, in advancing the program's ultimate goal of reducing pipeline incidents to zero. In 2022 we accelerated our progress toward establishing a mature, robust PSMS program by:

- Strengthening NW Natural's existing safety programs and integrating them into our PSMS
- Implementing documentation for safety-related processes
- Strengthening our event-learning program, including training across a diverse group of personnel

Damage prevention

Digging by third-party contractors is the biggest cause of damages to NW Natural pipelines. Excavation damages have a significant economic impact in the U.S., costing society an estimated \$30 billion annually.⁹ Preventing these damages protects public safety, prevents interruptions in gas service and helps reduce pipeline emissions.

NW Natural began comprehensive efforts to address this issue in 2006, working with our state regulators to implement more rigorous dig laws, and providing training and intervention to help contractors excavate safely. Since then, damages due to digging have declined by about 70%.

NW Natural's already low damage rate decreased again in 2022, to the lowest level we have ever recorded.

We continued to drive down our damage rate in 2022 as we refined our risk-based locate response program. State-of-the-art [technology](#) makes it possible to evaluate every locate request to identify the riskiest excavations. This data-driven approach helps us understand where the risk of damage is highest so we can effectively prioritize and intervene where necessary. We also continued a robust multimedia campaign, in Spanish and English, reminding landscapers, contractors and homeowners how to avoid damaging lines. Excavators or homeowners can call 811 or use the free NW Natural safety app to have utility lines located before digging.

In 2022 the percentage of excavation damage incidents attributable to insufficient excavation practices fell to a historic low of 33%—down from 38% in 2021. In 2022, we increased the amount of time damage prevention specialists spend on high-risk interventions. Our specialists also engaged third-party excavators by:

- Offering trainings tailored to the kind of work each contractor does
- Contacting individual excavators prior to project start date to discuss the scope of work, dig laws, best practices and the location of NW Natural facilities
- Meeting the excavator on-site to perform jobsite assessments
- Providing a point of contact and support for the excavator on that jobsite and any future jobsites

NW Natural is accredited by the Common Ground Alliance (CGA) Damage Prevention Institute, an association committed to promoting public safety and effective damage prevention practices through partnership and collaboration. We were the first Oregon-based utility to earn a Gold Shovel Standard certification in 2021, a widely recognized credential that certifies the company is taking specific, comprehensive actions to prevent underground infrastructure damages. In 2022, we were once again awarded the certification.

⁹ https://commongroundalliance.com/Portals/0/2020%20DIRT%20Report_09.29.2021_Final4.pdf?ver=2021-11-03-143123-490

DAMAGES PER THOUSAND LOCATES



Source: Annual DOT Report

Cybersecurity

Intensifying our focus on cybersecurity

We prioritized cybersecurity in 2022 to protect our critical systems and customer data. Our vigorous cybersecurity program continued to be a significant and growing piece of our investment portfolio. About 6.5% of our total capital expenditures in 2022 were related to cybersecurity and nearly 24% were information technology (IT) related. NW Natural’s commitment to cybersecurity encompasses our third-party partners. We manage third-party cybersecurity risks by asking detailed questions, reviewing independent assessments, requiring incident reporting, and ongoing monitoring. In 2022, we were not materially impacted by any information security breach of a third party. Our cybersecurity activities are supported and overseen at the highest levels of the company and the audit committee of our board.



NW Natural had zero known reportable¹⁰ information security breaches in 2022

With significant new investments to enhance cybersecurity protocols, systems and staff, we continued to incorporate IT best practices in 2022. This included expanding our IT teams, implementing new security processes and products, and onboarding new partners for managed services and 24/7 monitoring and detection.

Cybersecurity highlights for 2022 include:

- Implemented more than half of our five-year cybersecurity roadmap in a single calendar year
- Our cybersecurity team was engaged every step of the way as we completed the company’s largest IT project ever—a major upgrade to our enterprise resource planning system.
- Executed eight tabletop exercises with the business to practice for potential security incidents
- Performed successful penetration tests. These simulated attacks, carried out to evaluate the security of an IT infrastructure, are critical for detecting vulnerabilities and combatting threats
- Received TSA approval of our Cybersecurity Implementation Plan for meeting revised federal [security directives](#)

¹⁰ For the purposes of this report, “reportable information security breaches” are those that are required to be reported to the Securities and Exchange Commission or the public generally.

Cybersecurity strategy and operations

We continually review and update our cybersecurity strategy to help secure technology systems and ensure the safe flow of gas to our customers. In 2022 we launched a new cybersecurity strategic plan. The previous plan was a five-year strategy created in 2021, but we updated it because more than half the proposals it outlined were completed after just a year. The latest version of the plan defines our cybersecurity strategy from 2023 through 2027. It focuses on six key objectives: objectives: security governance, cybersecurity risk management, compliance, defensibility, zero-trust architecture, and cloud security.

While implementing new policies and plans in 2022, **we sharpened our focus on cybersecurity operations.**

- 100% of our active employees participated in information security training that demonstrates how to protect confidential information at work, identify potential cybersecurity risks and take action in case of a suspected information security incident. We also provided focused phishing training in 2022, including extra training for groups that face elevated security risks.
- Additional staff onboarded in 2022 enabled us to provide security risk assessment briefings for executives on threats to the company
- Continued adhering to process controls, performing security assessments and working to align our program to the [NIST Cybersecurity Framework](#) and other key standards
- Expanded our detection capabilities
- To reduce cyber risks, we routinely:
 - » Use multiple layers of security technology
 - » Employ a variety of technologies and processes, such as multi-factor authentication (MFA), that add a layer of protection to the sign-in process
 - » Have endpoint protection to shield servers and laptops from cyber threats
 - » Execute third-party penetration tests to expose vulnerabilities
 - » Perform periodic maturity assessments to measure our progress
 - » Test response actions
 - » Work closely with numerous local and federal agencies, including the U.S. Department of Homeland Security, Department of Energy, Transportation Security Administration and the FBI

Our cybersecurity operations received an excellent rating of 750 in 2022 from BitSight, the world's foremost cybersecurity ratings platform. NW Natural's rating was higher than 70% of our industry peers.

Cybersecurity activities are supported and overseen at the highest levels of the company. Our executive team, with leadership from our vice president and chief information officer, is responsible for implementing the information technology and services (IT&S) strategic plan and setting the tone at the top with respect to cybersecurity. Specialists in particular business areas (for example, information technology, security and procurement) apply their specific expertise to the company's strategy. Our audit committee, comprised of four independent board members, oversees management's strategies, investments and risks related to the company's IT systems, cybersecurity and compliance. In 2022, the audit committee received three cybersecurity updates. The full board was briefed on cybersecurity matters reviewed by the audit committee, and the board received two additional cybersecurity-specific updates in 2022.



Matt Carlson: 2022 Chief Information Security Officer of the Year

In a time of urgency around the issue of cyber threats to the nation's energy delivery systems, the job of chief information security officer for a utility requires technical knowledge, strong leadership skills, composure under pressure and a deep understanding of industry-related compliance standards and regulations. These are the qualities NW Natural cybersecurity & compliance director Matt Carlson displays as the person responsible for the security and compliance of all company-wide technology systems. His skills have been honed through a breadth and depth of experience that includes serving in the U.S. Navy, earning two master's degrees and working at the U.S. Department of State and U.S. Department of Treasury. In 2022 Carlson was named CISO (Chief Information Security Officer) of the Year by the Portland chapter of the Society for Information Management (SIM), which recognizes excellence in information security leadership. He's quick to point out that the award reflects his team's excellent work. "My team members all share a strong desire to learn and they are concerned with the impact their efforts have on the company," he said. "This award attests to the high quality of their work."

Employee Safety

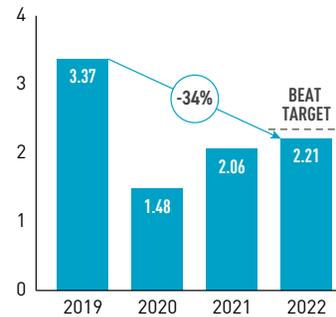
NW Natural is engaged in a companywide initiative to systematically pursue our ultimate goal of eliminating safety incidents. Our Journey to Zero program, launched in 2020, focuses on preventing injuries and building a safety culture based on open communication, collaboration, and a strong service ethic. Each year, we set a target of reducing injuries by 10% over the previous three-year period.

A year of strong safety results

Our Journey to Zero on-the-job safety initiative continued to deliver results in its third year, with a decrease in workplace injuries and a big increase in near miss reporting (good-catch rate) from 2021. The period from 2020 to 2022 marked one of the best three-year safety performances in our history. Highlights include:

- For the second year in a row, we ended with the lowest number of workplace injuries in nearly two decades. This reflects a steady trend of improvement in the total recordable incident rate (TRIR), which has decreased by nearly half since 2019.
- We also saw a 25% increase in near miss frequency/good-catch rate, which improved from 12.64 in 2021 to 15.86 in 2022—an increase of nearly 78% since we launched Journey to Zero in 2020. The near miss frequency rate is a leading indicator that reflects our expanded focus on proactively addressing safety concerns.
- We had the lowest number of vehicle collisions in 12 years, one of the best results since we started collecting data in 1979.
- The severity of injuries remained consistently lower. Although there was a slight uptick of 0.15 (representing less than one injury) in days away or restricted time (DART), most incidents resulted in fewer than five days of days out of work, or on restricted duty. Added together, the severity of incidents for the entire three-year period from 2020-2022 was lower than the single-year total for 2019, the year before we launched our Journey to Zero safety initiative.
- We had no OSHA injuries in October 2022—the best monthly safety performance since we began documenting safety incidents.

DAYS AWAY OR RESTRICTED TIME RATE (DART)



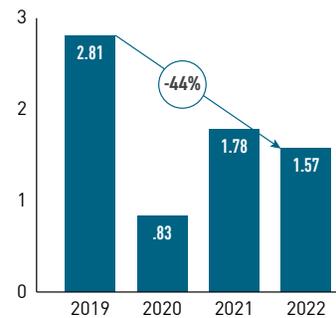
DART = $\frac{\text{\# of incidents with lost time or restricted duty} \times 200,000}{\text{Number of hours worked}}$

TOTAL RECORDABLE INCIDENT RATE (TRIR)



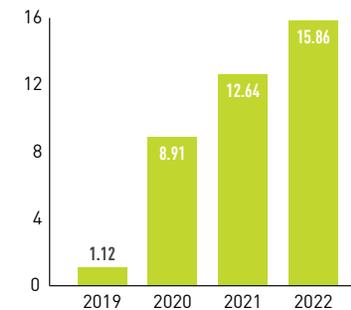
TRIR = $\frac{\text{\# of incidents requiring medical attention} \times 200,000}{\text{Number of hours worked}}$

LOST TIME INCIDENT RATE (LTIR)



LTIR = $\frac{\text{\# of lost time injuries} \times 200,000}{\text{Number of hours worked}}$

NEAR MISS FREQUENCY RATE



Continuing the journey toward safety excellence

In addition to emphasizing critical on-the-job safety practices, we took several far-reaching steps in 2022 to keep employees safe and healthy, including:

- **Introducing a “Work Ready” program** designed to help employees work and move in safer ways, using the same techniques that keep athletes at peak performance. Work Ready brings a scientific approach to preventing workplace injuries—including strains and sprains, the most common causes of lost work time. The voluntary app-based program is not just for employees out in the field lifting, reaching, climbing and bending; it’s also for employees who are sitting at desks looking at screens. Work Ready is available for employees and their immediate family members.
- **Implementing powerful enterprise resource planning (ERP) technology** that includes new tools to streamline health and safety reporting. The new platform allows employees to log incidents, near misses and safety observations in real time from a mobile device, laptop or desktop computer, and it provides a one-stop shop for analyzing safety submissions and extracting key insights.
- **Intensifying our focus on preventing Serious Injury and Fatality (SIF) incidents.** NW Natural has a zero SIF rate, with no fatalities for more than a decade. To take SIF prevention a step further, we began reviewing all collisions, injuries and near miss/good catch reports to identify potential SIF (PSIF) incidents and evaluate the controls we have in place to prevent serious injuries.
- **Designing facilities to promote employee safety.** Prior to the opening of our new Lincoln City Resource Center in 2022, our operations, facilities and safety teams used [prevention through design](#) principles to eliminate or mitigate safety and ergonomic risks. These principles are applied in the design of all newly constructed or remodeled NW Natural facilities.



- **Signed on to a nationwide worker-safety study** supported by the National Institute of Safety and Health (NIOSH). The [Total Worker Health® research program](#) focuses on reducing and preventing work-related risk factors that have an impact on employees’ safety, health and well-being. In Oregon the study is run by Oregon Health & Science University’s Oregon Healthy Workforce Center. In addition to contributing to the research effort, we’re getting ideas we can implement to contribute to the excellence of NW Natural’s employee safety program.



Rising to the Work Ready Challenge

In summer 2022, NW Natural held its first Work Ready Challenge, a spirited competition that encouraged employees to engage with the company’s new app-based Work Ready injury prevention program. The challenge introduced participants to new health routines and inspired teams to build connections. The program has steadily gained traction. Many work groups practice the Work Ready dynamic warm-up routine every day, and benefits are showing up in important ways. Within a month of the Work Ready launch, injury stats were impressive, with only three musculoskeletal injuries and no recordable injuries. We had zero OSHA injuries in October 2022—the best monthly safety performance since we began documenting safety incidents.

Not to be used for investment purposes—see NW Natural and NW Natural Holdings most recent Form 10-Ks as updated by the most recent quarterly and periodic reports for information relevant to investment decisions.

Our Safety Management Program

NW Natural's health and safety policies and procedures are designed to comply with all applicable regulations—and we strive to go beyond compliance.

- We have a strict stop-work policy when an employee is involved in an accident, and a 24/7 nurse care line available to all employees. We provide alternative working opportunities that allow employees to recover while continuing to contribute.
- A portion of our executives' compensation is tied to achieving our safety metrics, and our board of directors regularly reviews company safety metrics.
- We have a safety steering committee overseen by our executives, as well as a dedicated safety team led by our VP, chief human resources and diversity officer, who reports directly to the CEO.
- We monitor safety performance to help us understand the origins of incidents and develop root-cause trend analysis.
- We work to incorporate industry best practices and benchmarking, including peer analysis and assessments done by the AGA. Our internal auditors periodically review our safety department and health and safety policies. We also conduct third-party assessments to audit aspects of our safety management system.

- We seek to work with contractors that meet or exceed safety standards and practices for their industries. We use ISNetworld's contractor management services to help us evaluate contractors' safety performance and policies, including criteria such as insurance and drug and alcohol testing standards.

Comprehensive safety and technical training

We maintain an extensive, proactive training program that includes compliance, emergency preparedness, identifying hazards and handling high-risk situations. Every year operations employees complete classroom instruction and hands-on training at our state-of-the-art Training Town facility, which features a simulated neighborhood complete with functioning underground natural gas lines. We also offer self-paced virtual training through our learning management system (LMS) to keep training current and support our blended learning approach.

NW Natural employees logged more than 30,000 safety training hours in 2022, and we also continued to provide training for third-parties. We hosted more than 300 immersive safety trainings to prepare firefighters to respond to emergencies that involve or affect the natural gas system.

The technical training department fully leveraged NW Natural's new LMS in 2022 to obtain a robust set of data for analyzing the effectiveness of our safety training. The ability to track employee qualifications and automate training requirements helps us ensure regulatory compliance and verify that our field personnel have the knowledge and skills to maintain system safety, identify hazards and safeguard our crews, customers and communities.

2022 TRAININGS



30,667
TOTAL PIPELINE
SAFETY TRAINING
HOURS



2,080
TRAINING HOURS
clocked by employees
at our "Training Town"
simulated neighborhood



**362-member
field staff**
attended additional quarterly, annual,
and scenario-based safety trainings,
as well as monthly safety presentations

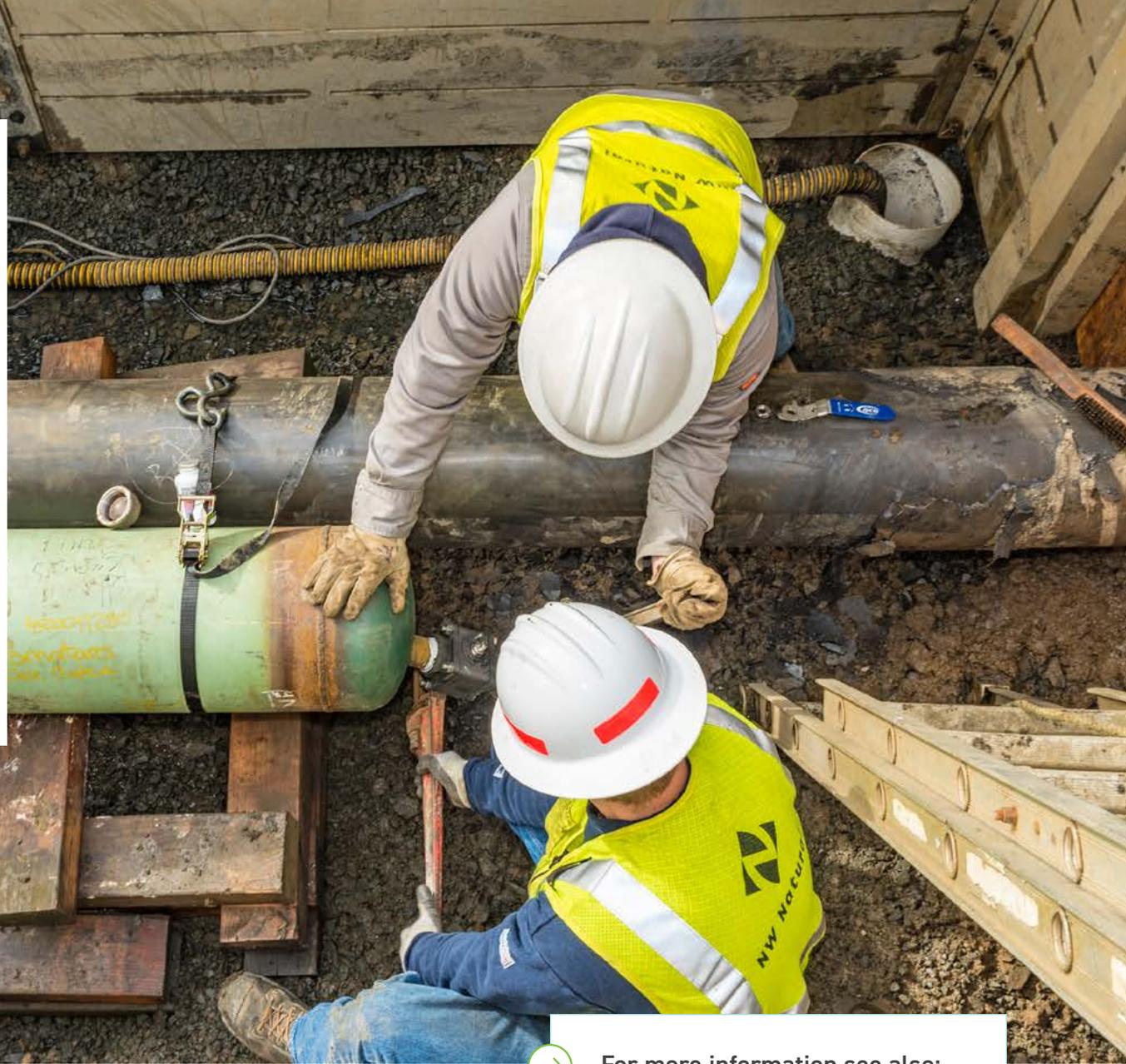


**329 firefighters
trained**
in emergency procedures
involving gas lines

Quality Assurance Program

Quality Assurance (QA) programs for gas distribution utilities are not mandated by federal code, but NW Natural has had a QA program in place since 2006. The QA team follows up on training and inspects work in the field to verify that employees and contractors are working safely and effectively across field operations. In 2022, the team completed nearly 3,000 inspections of work performed by NW Natural employees or contractors. Our quality & qualifications manager reports results quarterly to a QA steering committee that includes leadership from field operations and operations technical services.

Since implementing our QA program we have seen consistent improvements in work performance, and we have collected data to help us provide timely feedback for employees and improve training, policies and procedures. Our leading practices in this area have allowed us to serve as a resource for companies looking to implement similar programs.



For more information see also:

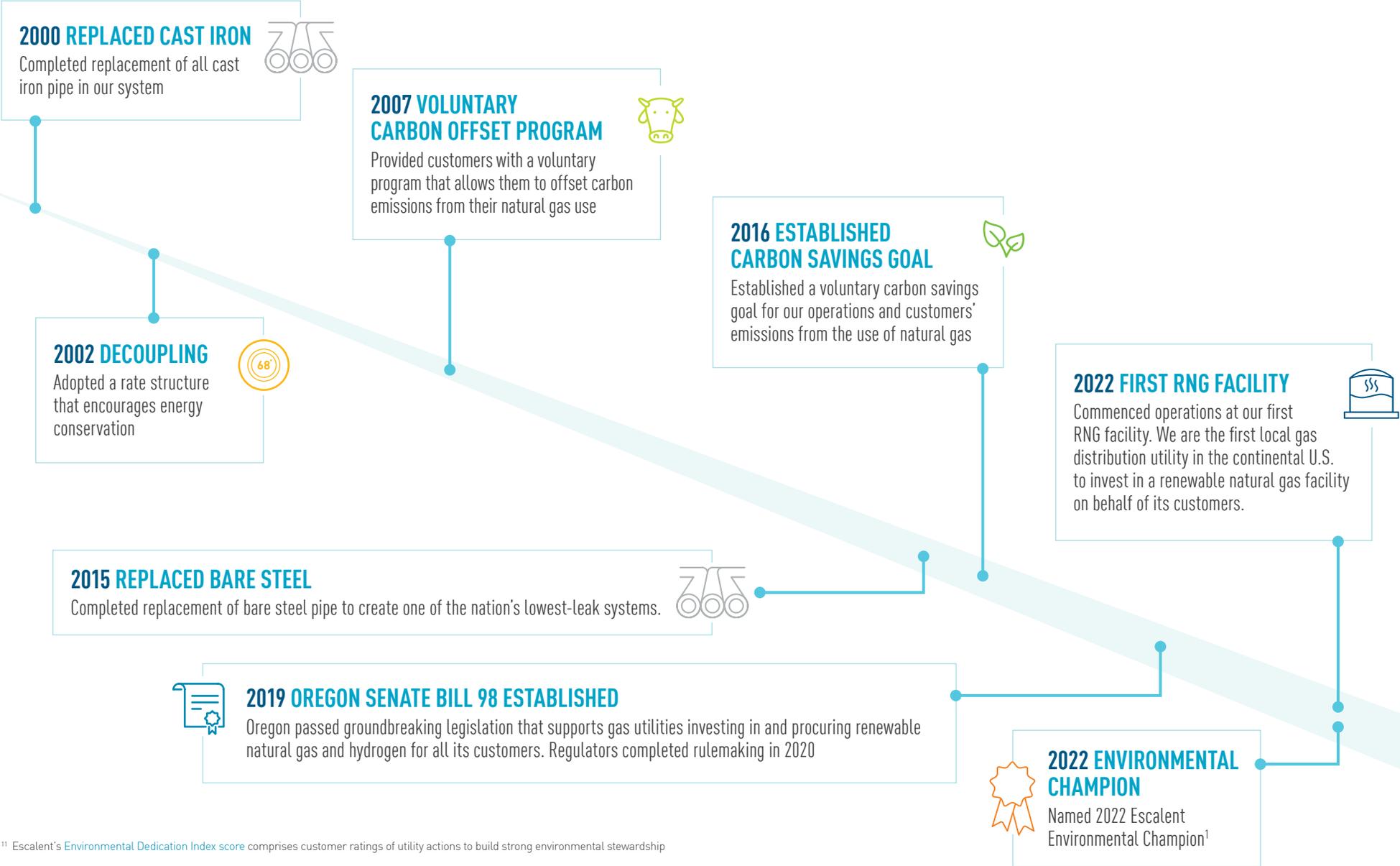
- [Residential Safety](#)
- [Our Safety Measures](#)
- [Pipeline Safety](#)

Environmental Stewardship

NW Natural's core value of environmental stewardship is a driving force behind everything we do. We believe NW Natural has an important role to play in helping our region move to a lower-carbon, renewable energy future in a more resilient and affordable way.

Building on a Legacy of Environmental Leadership

Our long history of environmental leadership reflects the values we share with the people we serve in Oregon and Washington.



¹ Escalent's Environmental Dedication Index score comprises customer ratings of utility actions to build strong environmental stewardship

OUR DISTRIBUTION SYSTEM IS A POWERHOUSE FOR DELIVERING NATURAL GAS TODAY AND RENEWABLES IN THE FUTURE

NW Natural's pipeline system

- Delivers 50% more energy than any other utility in Oregon¹²
- Meets 90% of energy needs for our residential space and water heat customers on the coldest winter days in Portland, Oregon

2x the energy

During winter peak-demand periods, the natural gas system in Portland, Oregon, delivers about twice as much energy as the electric system to residential customers

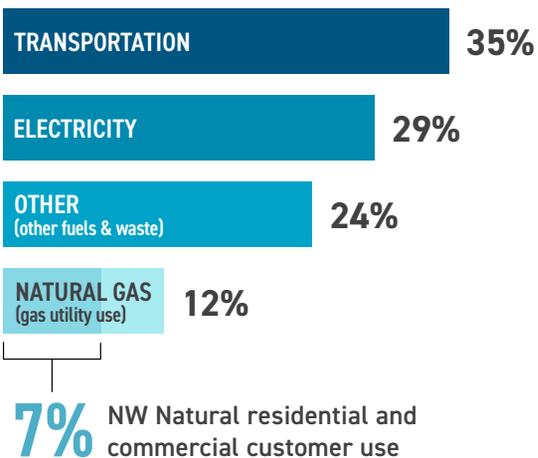
7% of Oregon's emissions

The natural gas our residential and commercial customers use accounts for only **about 7% of Oregon's greenhouse gas emissions**¹³

¹² Per data from the Oregon Public Utility Commission, 2021 Oregon Utility Statistics Book

¹³ NW Natural sales load data from the Oregon Department of Environmental Quality Greenhouse Gas Sector-Based Inventory 2021

OREGON GREENHOUSE GAS EMISSIONS BY SECTOR



Source: Oregon DEQ In-Boundary GHG Inventory 2021 data.



THE ELECTRIC SYSTEM DEPENDS ON NATURAL GAS

Electrical power generation is the largest end-use sector of natural gas in the U.S.¹⁴

Electric power generators use more natural gas in Oregon than the amount delivered by natural gas utilities to their customers for direct use.¹⁵

¹⁴ U.S. Natural Gas Consumption by End Use (eia.gov)

¹⁵ 2022 Oregon Public Utility Commission Biannual Report

Reducing emissions is crucial not only for gas utility systems, but also for electrical power generation, which is now the largest user of natural gas in the U.S. and accounts for more gas use than direct residential and commercial customers combined.

Industry leader in lowering emissions

Our vision of carbon neutrality begins with reducing emissions associated with the natural gas we deliver. The aggressive pipe replacement program we completed in 2015 has yielded important results. We saw a further decrease in fugitive emissions in 2022 compared to 2021 (see NW Natural's Emissions in Appendix). We're also focused on reducing emissions from our operations and our customers' use of natural gas.

NW Natural named Environmental Champion

NW Natural honors Earth Month every year with events to raise environmental awareness, and in 2022 we had an extra reason to celebrate: On Earth Day, the company was named an Escalent Environmental Champion. Escalent's Environmental Dedication score is based on customer ratings of utility actions to build strong environmental stewardship. In 2022 the survey included 79,223 customers of the nation's largest 140 utilities—electric and combination as well as natural gas providers. NW Natural was one of 31 companies to achieve the Environmental Champion designation in a year when overall scores were at a multi-year high.



Our Carbon Savings Goal

We believe we have a pivotal role to play in helping our region move to a lower-carbon, renewable energy future in a more resilient and affordable way. In 2016 we established NW Natural's [Low Carbon Pathway](#) as a cornerstone of the company's strategic plan, setting a voluntary goal of 30% carbon savings by 2035.¹⁶ This is a unique and aggressive target because it includes emissions from our customers' use of our product as well as emissions from our own operations. In 2022 we remained ahead of target pace for meeting this goal. We're taking steps right now to help achieve deep decarbonization in our region by:

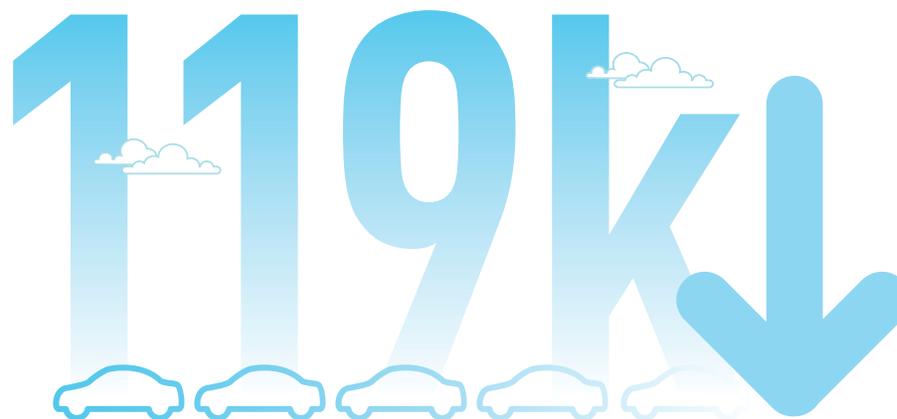
- Lowering energy use through increased energy efficiency and decreased consumption
- Providing customers with a voluntary program to purchase carbon offsets as an interim tool to reduce emissions
- Working to procure conventional natural gas with lower carbon intensity across the value chain
- Evolving our supply to include renewables in the pipelines

¹⁶ Based on 2015 emission levels attributable to NW Natural operations and customer use of our product

2022: Ahead of Target Savings Rate

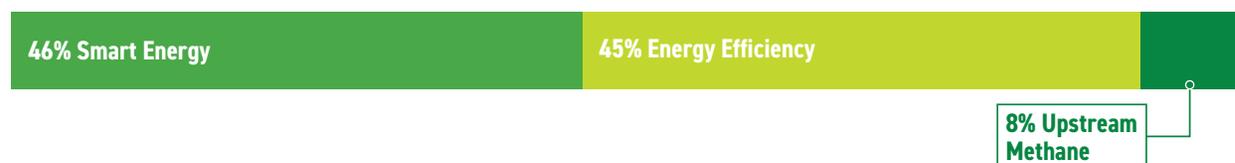
535,881 metric tons of carbon dioxide equivalent saved.

This marks 42% of savings toward goal, ahead of target pace.



2022 savings equal to removing nearly 119,000 cars from the road. (EPA GHG Equivalencies Calculator).

2022 Source of Savings Mix



Empowering customers to help fight climate change

NW Natural was the first stand-alone gas utility in the U.S. to offer customers a voluntary program that allows them to offset carbon emissions from their natural gas use. Launched in 2007, our Smart Energy program purchases third-party verified high-quality carbon offsets from projects that reduce or prevent the release of greenhouse gases.¹⁷ Many of these [projects](#) are biodigesters on family-owned dairy farms.

In 2022 we added RNG to the Smart Energy program for our Washington customers. RNG is a renewable, lower-carbon fuel produced from methane emitted by livestock manure, landfills, and other waste streams. Adding RNG projects to the Smart Energy program gives Washington customers a new mitigation resource and aligns with recent legislation that requires natural gas companies in the state to offer a voluntary RNG service. In Oregon some of our large commercial customers have asked for a renewable resource option, and at year-end in 2022 we were preparing to request approval from the Oregon Public Utilities Commission to add RNG to our Smart Energy program.

Smart Energy participation increased nearly 14% in 2022, and now more than 11% or about 84,000 of our residential customers are enrolled in the program. They funded over 246,000 metric tons in emission reductions, equivalent to removing over 53,000 cars from the road in 2022. That made Smart Energy the largest contributor to our lower-carbon goal NW Natural set in 2016 and accounted for more than 246,000 metric tons of savings toward the goal. In recognition of customers who sign up for Smart Energy,



Equipment innovation

We are working to encourage the development of progressive technologies that use less energy. Through our partnerships with GTI Energy,¹⁷ Low-Carbon Resources Initiative and Northwest Energy Efficiency Alliance we seek to transform the market for innovative products like gas heat pumps, net zero energy homes, fuel cells and other progressive energy-saving technologies. We co-founded the North American Gas Heat Pump Collaborative to support accelerated adoption of highly efficient space and water heat equipment that are designed to reduce carbon emissions. Gas-powered heat pumps offer the opportunity to dramatically reduce natural gas consumption while maintaining equipment performance in cold weather—a challenge for electric heat pumps, which lose efficiency in low temperatures. As of 2022, gas heat pumps are currently being piloted in homes and research indicates that new technologies like these have the potential to reduce energy use by 40%¹⁸ or more in the residential sector.

¹⁷ Formerly Gas Technology Institute - <https://www.gti.energy/about/mission-values-history/>

¹⁸ Opportunities for Reducing Greenhouse Gas Emissions Through Emerging Natural Gas Direct-Use Technologies. An American Gas Foundation report prepared by Enovation Partners, 2019

NW Natural makes a donation to Oregon Parks Forever, a nonprofit organization raising funds to enhance and preserve special places and experiences in Oregon's parks.

Since its inception, the Smart Energy program has funded over 1.9 million metric tons of CO₂e emissions reductions.

Reducing energy use

From conservation to energy efficiency improvements, reduced energy use currently accounts for the second largest savings toward our Low Carbon Pathway goal, and we're working hard to increase that savings in the coming years.

- For two decades NW Natural's rate structure has been based on decoupling, which is intended to break the link between a utility's revenues and the quantity of gas used by its customers, removing any financial incentive a utility might have to discourage customers from conserving energy. Today more than 81% of our gas utility revenues are decoupled.
- Through our [Less We Can](#) public awareness campaign, we actively encourage customers to use less energy.

Through Energy Trust of Oregon, we've consistently supported energy-efficiency measures such as cost-effective equipment upgrades, insulation and building improvements that last for many years. In 2022, NW Natural customers provided funding that covered \$35.2 million of energy-efficiency expenses and generated 5.6 million therms in energy savings. That's equivalent to removing greenhouse gas (GHG) emissions from more than 6,500 cars for one year. Energy efficiency and reduced

usage contributed nearly half of the savings we achieved in 2022 toward our voluntary goal of 30% carbon savings by 2035. Since 2016, we have saved about 240,000 metric tons related to efficiency work.

	Energy-Efficiency Expenses (in millions)	Therms of Energy Savings (in million of therms)	Equivalent Cars Removed from Roads
2022	\$35.2	5.6	6,500
2021	\$34.5	6.5	7,500
2020	\$28.8	6.8	7,800

By market, in 2022 our Oregon service territory had 514,000 MMBtu of net energy savings and our Washington service territory had about 43,000 MMBtu of gross savings.

Advancing energy efficiency in the Northwest

Northwest Energy Efficiency Alliance (NEEA) is a non-profit collaborative that works to advance energy efficiency on behalf of more than 13 million consumers in Oregon, Washington, Idaho and Montana. NEEA supports accelerated adoption of highly efficient space and water heat equipment designed to reduce carbon emissions. After a long history of success stories in the electric sector, NEEA began the nation's first natural gas market transformation effort in 2015. Holly Braun, business development manager at NW Natural, currently serves as vice chair of NEEA's board of directors, which includes representatives of energy efficiency organizations, public interest groups and state governments.

Gas heat pumps

In 2022, gas heat pumps moved from the laboratory into real-world residential settings. Through a FortisBC pilot program, two companies debuted gas heat pump systems that are intended to replace both a gas furnace and water heater. With a design of 140% fuel-efficiency and a capacity to operate down to -40 degrees F, the technology is projected to save an average Fortis residential customer roughly six months of annual gas use and reduce household GHG emissions by up to about two tons of carbon dioxide (CO₂) equivalent. To lower emissions even further, the units are designed to operate on renewable natural gas or gas-hydrogen blends without needing any modifications. Gas heat pumps provide cooling as well as heating, with a distinct climate advantage: They don't rely on hydrofluorocarbons (HFCs), which are typically used as refrigerants in electric heat pumps. HFCs are potent greenhouse gases with a global warming potential thousands of times that of CO₂.



Industrial energy efficiency

Sodbuster Farms Inc., a NW Natural customer, grows hops in Oregon and uses gas-fired burners to process them for sale to breweries in the Pacific Northwest. The hop production industry has specialized heat processing requirements, and over the years hop growers have moved from wood-fired kilns, to diesel, to natural gas. "As farmers, we care deeply about our land, air, water and community, and natural gas is the cleanest-burning fuel that can be used on our farm," said Douglas Weathers, Sodbuster Farms president. To advance its environmental objectives, the company has focused on reducing gas use by optimizing its drying equipment and introducing state-of-the-art technology. Weathers is planning on more modifications to cut energy use and emissions—and, he said, "We're excited that even cleaner options such as renewable natural gas and hydrogen are coming online."

"We are fully supportive of statewide plans to invest in renewable natural gas and hydrogen. Ensuring the gas pipeline infrastructure is in place means we'll be ready to convert when renewables are available."

— Douglas Weathers,
Sodbuster Farms President

Lower-Emissions Natural Gas

Our residential and commercial customers' use of natural gas accounts for just under 7% of Oregon's greenhouse gas emissions, and we're working to reduce that footprint even further. Cutting emissions across the supply chain is foundational to this effort.

- NW Natural sources natural gas from two of the most stringently regulated regions of North America: the U.S. Rockies and Western Canada.
- NW Natural is one of the first utilities in the nation to develop and implement an emissions-screening tool that allows us to understand the carbon intensity of gas supplies and consider environmental impact when we evaluate supply purchases (alongside other key purchasing criteria such as price, creditworthiness and geographic diversity). Through this analysis we can award contracts to lower-emitting producers. Our program reduced the upstream emissions associated with the natural gas production of the product we procure and deliver to customers from our U.S. supply purchases by 34% in 2022.
- We use alternative blowdown practices that reduce emissions from pipeline venting. In 2022, we avoided releasing 1,278 metric tons of CO₂e, reducing the amount these blowdowns would have vented into the atmosphere by 97%.
- Because the majority of emissions in the value chain occur in upstream natural gas production and processing,¹⁹ we're working with like-minded industry members and trade groups to encourage producers to adopt best practices.

By targeting gas purchases from more environmentally conscious producers, we have avoided more than 42,000 dekatherms of methane emissions for a year over year savings of more than 43,000 metric tons of CO₂e.

¹⁹ U.S. EPA, Inventory of Greenhouse Gases and Sinks: 1990-2018

²⁰ 2022 Methane Emissions Intensity Report, One Future

²¹ Ultra-Low NO_x Natural Gas Vehicle Evaluation. Report prepared by University of California Riverside's College of Engineering-Center for Environmental Research and Technology, 2016

²² <https://www.epa.gov/greenvehicles/learn-about-green-vehicles-compressed-natural-gas#:~:text=CNG%20generally%20creates%20fewer%20smog,%2C%20processing%2C%20and%20distributing%20CNG>

<p>NWN FOUNDING MEMBER</p> 	<p>The Natural Gas Supply Collaborative is a group of natural gas purchasers that deliver enough natural gas to meet the needs of more than 60 million households. The group focuses on promoting safe and responsible natural gas production practices, along with greater transparency around key issues such as water and land use, air quality, and emissions associated with natural gas production.</p>
<p>NWN MEMBER</p> 	<p>NW Natural is a member of Our Nation's Energy Future (ONE Future), a coalition representing more than 20% of the U.S. natural gas value chain and committed to reducing methane emissions through adopting science-based standards and best practices. ONE Future has exceeded its goal of reducing methane emissions across the natural gas value chain to below 1% by 2025.²⁰</p>
<p>NWN FOUNDING MEMBER</p> 	<p>Methane Challenge Program partners are recognized by the EPA as leaders in reducing methane emissions. As a founding partner, NW Natural is adopting practices such as alternative blowdown methods. Instead of venting gas into the atmosphere when we depressurize pipelines, we flare gas or reroute it to stay on a pipeline—a process known as cross-compression. With these practices we are able to reduce potential greenhouse gas emissions by 90% to as much as 100%. We also use line isolation and drawdown to reduce volume before venting. These are recognized as industry best practices.</p>

Transportation

Replacing dirtier transportation fuels such as diesel with cleaner-burning natural gas reduces pollutants and is another source of carbon savings. Heavy-duty vehicles that run on CNG rather than diesel emit up to 90% less nitrogen oxide (NO_x) air pollutants and particulate matter,²¹ and CNG can reduce tailpipe greenhouse gases by about 20%.²² Emissions also generally do not vary with engine load, as they do with diesel engines. In 2022, NW Natural supplied 14 companies with 5.5 million therms of CNG to power their fleets. Our entire NW Natural CNG fleet was powered by RNG in 2022.

"Transportation is the largest contributor of greenhouse gas emissions in Oregon, at 35%."

— Oregon Department of Energy

Our Vision of Carbon Neutrality

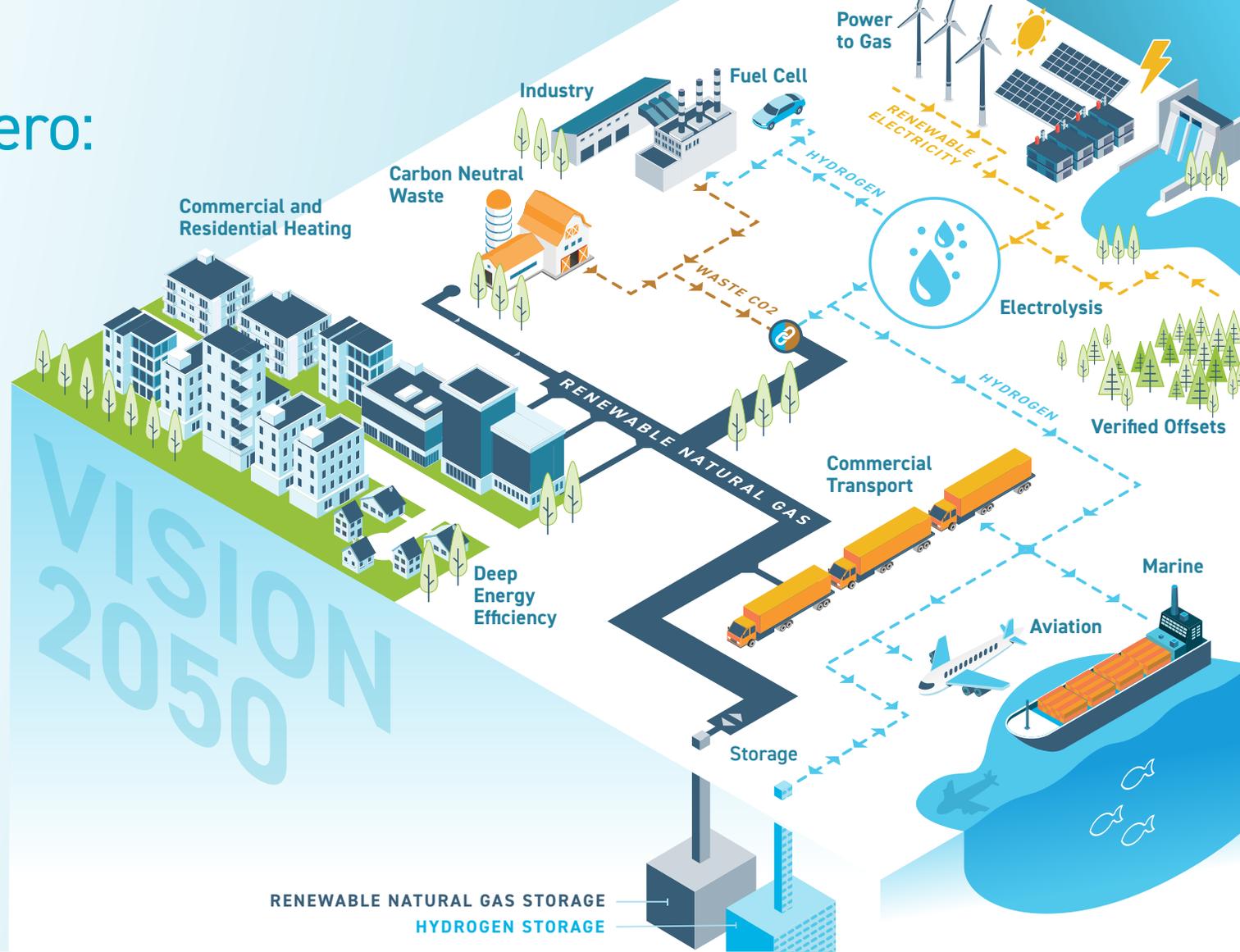
We believe climate change requires rapid innovation and collective action, which is why we're reimagining the role of our system and the fuel we deliver. We're resourced and ready to play a pivotal role in the transition to a diversified, resilient carbon neutral energy system.

Destination Zero:

Our vision of carbon neutrality

A decarbonizing network:

-  Renewable Natural Gas
-  Dedicated Hydrogen
-  Waste CO₂
-  Renewable Electricity



Vision 2050

Since NW Natural started delivering energy in 1859, the fuel going through our pipes has changed from manufactured gas to natural gas. We're on the way to our next evolution, from natural gas to renewable natural gas and hydrogen.

Our goals are focused on collective action to:

- Further reduce energy use through intensive energy-efficiency measures and new technologies
- Lower the carbon intensity of the product we deliver by shifting from conventional natural gas to renewable natural gas and hydrogen
- Leverage our tight pipeline system and long-duration storage to enable a faster, resilient, cost-effective energy transition
- Look to emerging decarbonization models such as carbon capture, utilization and sequestration that align with our skills and services
- Facilitate adoption of policies that use joint gas and electric system planning and encourage the development of renewables for the pipeline

Every year we focus on taking specific, measurable actions to advance our carbon neutrality vision. In 2022, we:

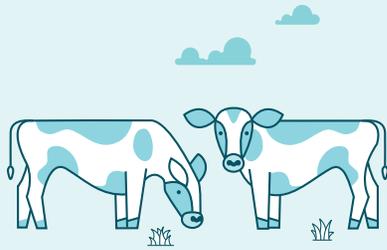
- Remained on track to meet or exceed our Low Carbon Pathway targets.
- Completed our first RNG project to serve our customers and began construction of a second utility RNG project.
- Interconnected a new RNG facility in Eugene, Oregon onto our system to deliver renewable supplies to the transportation sector.
- Successfully tested a 15% hydrogen blended gas and began using it to heat our training facility in Sherwood, Oregon.
- Entered into a partnership with Modern Hydrogen on an innovative methane pyrolysis technology project to create hydrogen and blend it into our Portland facilities' system.
- Signed contracts with several of our commercial customers to pilot new carbon capture equipment designed to capture emissions from the existing boilers to reduce both energy use and greenhouse gas emissions.
- Advocated for public policy support at the federal and state level to accelerate the development of renewable energy for the pipeline and make it affordable for customers.



Our key decarbonization principles

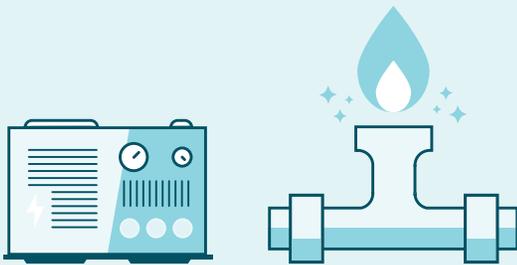
- Helping customers use less energy is the fastest and least expensive way to reduce emissions
- All forms of renewable energy are needed in a balanced, lower-carbon future
- A dual energy system—gas and electric—is essential to handle peak energy loads, provide resiliency, and withstand extreme weather events
- Leveraging our existing modern system and long-term storage capacity in new ways to help develop a renewable energy future while maintaining long-term energy affordability and dependability
- Energy system diversification and competition provide the best opportunity for accelerated innovation
- We must drive toward carbon neutrality in a way that leaves no one behind

Our vision of carbon neutrality



RENEWABLE ENERGY*

Renewable sources that do not contribute new carbon to the atmosphere



COORDINATED ENERGY SYSTEMS

Partnership with cleaner electric systems to create seasonal and peak energy storage



ENERGY EFFICIENCY

Encouraging end-use innovation for deep efficiency

*From a lifecycle emissions accounting perspective

Delivering on Our Vision

At NW Natural, the ultimate vision of carbon neutrality isn't a slogan or an afterthought: It's a longstanding commitment that underpins and shapes our business. We are constantly deepening, refining and living our commitment toward that vision.

- In 2016 we established our Low Carbon Pathway as a cornerstone of the company's strategic plan and began planning for renewable energy in our pipelines.
- In 2018 we commissioned a [deep decarbonization study](#) to evaluate strategies for achieving an 80% reduction in economy-wide greenhouse gases by 2050.
- In 2021 we released our [Vision 2050: Destination Zero](#) report, which presents multiple scenarios, using currently available technologies, toward a carbon neutral future.

In-depth analysis lays out multiple scenarios of decarbonization

In 2021 we issued our [Destination Zero Report](#), an in-depth scenario analysis for carbon neutrality incorporating residential and commercial customers' use of our products. The scenarios we analyzed incorporate varying applications of:

- Enhanced energy efficiency, coupled with new equipment technologies that reduce consumption
- Lower-carbon fuels such as RNG and hydrogen, along with small amounts of carbon capture
- Verified offsets in amounts that decline over time

Using varying levels of these applications, the report analyzes three different views of the future and demonstrates possible scenarios of carbon neutrality by leveraging our existing natural gas system. All scenarios draw on decarbonization measures that are technically viable today and ready to be implemented with public policy support.

"This is one of the first comprehensive assessments by a gas utility demonstrating multiple scenarios to achieving carbon neutrality."

— Justin Palfreyman, NW Natural President

Renewable Natural Gas for the Pipeline

Displacing natural gas with increasing amounts of renewable energy is central to our plan. We're already procuring supplies of RNG, a lower-carbon natural gas alternative that can be transported through our distribution system just as wind and solar energy are transmitted through existing electrical wires.

The renewable fuel that reduces waste

RNG advances long-term carbon neutrality goals while closing the loop on waste. As a renewable fuel that can directly replace natural gas, RNG provides a reliable and cost-efficient decarbonization solution that exists right now and works with the infrastructure we already have. RNG can help mitigate the negative environmental impact of society's growing accumulation of solid waste. In the U.S., that includes methane emissions from 34 billion gallons of [wastewater](#), more than a billion tons of [livestock manure](#), and 144 million tons of [food waste](#) every year. Governments such as the UK and Denmark are already proving this concept by embracing methane capture and utilization as a way to help achieve the net-zero goals outlined in the Paris Agreement.

RNG is the future, and it's here now

RNG is already in use at major facilities like [WM \(formerly Waste Management\)](#) and the [Port of Seattle](#), which cut emissions by 46% in a single year by switching to RNG. There are well over 450 RNG facilities online or under construction in the U.S. today. Denmark, a leader in the production of biogas in Europe, increased the proportion of biogas injected into its system to almost 25% of total demand as of 2021, and the country reports it is on track to meet [75% of its gas demand from RNG](#) by 2030 and 100% by 2034.



RENEWABLE NATURAL GAS IS AN ESSENTIAL ELEMENT OF OUR VISION FOR THE GAS SYSTEM BECAUSE:

RNG can reduce greenhouse gas emissions, and it is interchangeable with conventional natural gas, so RNG can be added directly into existing gas pipelines.

RNG can be stored for distribution on demand, and the supply of waste doesn't fluctuate the way weather-dependent renewable energy sources do.

RNG can replace diesel fuel in transportation to reduce emissions and improve local air quality.

RNG potential

Studies indicate that the potential supply of RNG is sufficient. An Oregon Department of Energy [report](#) identified nearly 40 billion cubic feet of technical potential, almost equivalent to the total amount of natural gas used by all Oregon residential customers today.²³ Nationwide, RNG production potential is [estimated](#) to be 10 to 30 times greater than current production, and the number of production facilities in the U.S. increased by nearly 79% from 2020 to 2022. The [Argonne National Laboratory's database](#) shows a sustained, rapid increase in RNG projects, and RNG investment incentives in the 2022 Inflation Reduction Act could spur significant new growth of the industry.²⁴

RNG PROJECTS ACROSS NORTH AMERICA

RNG Facilities

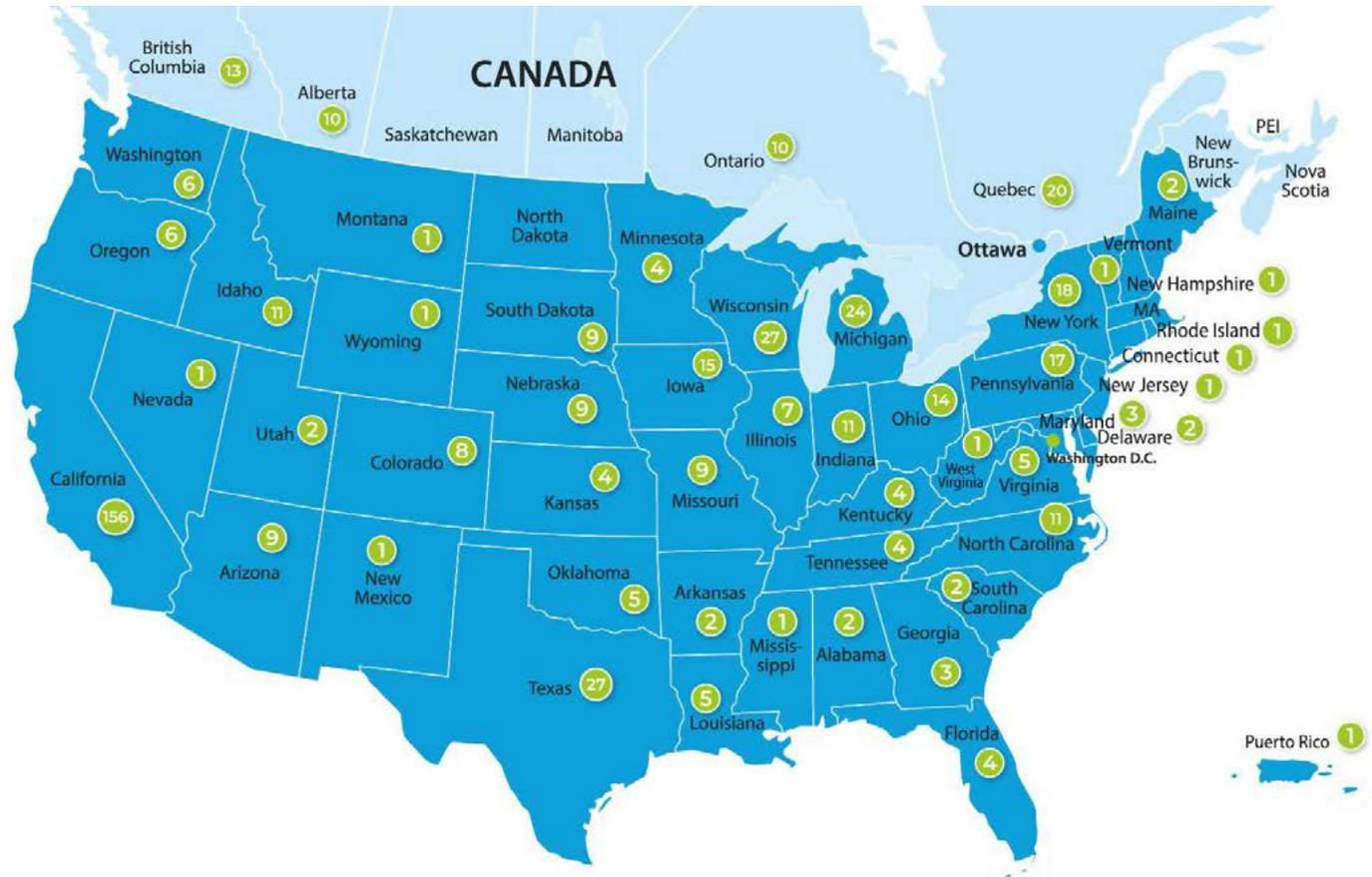
Operational: **268**

Under Construction: **109**

Planned: **136**

TOTAL: 513

Source: RNG Coalition map as of 8/2/22



Oregon supports renewables

In Oregon, [Senate Bill 98](#)—the first legislation of its kind in the U.S.—allows gas utilities to procure renewable natural gas, and eventually renewable hydrogen, for customers. The law outlines voluntary goals for adding as much as 30% RNG into the state’s pipeline system by 2050 and allows gas utilities to use up to 5% of their revenue requirement to cover the incremental cost. In 2021, we had agreements with options to purchase or develop RNG totaling 3% of our current annual sales volume in Oregon. Washington state passed House Bill 1257 in 2019, which also supports renewable energy procurement and investment by natural gas utilities.

Our renewable natural gas projects

NW Natural was one of the first movers in the market for RNG, which wasn't significantly developed even five years ago. As a result, we've been positioning ourselves to play a key role in the market as it develops. We have a full-time staff devoted to pursuing supplies of RNG with a focus on getting the best possible price on behalf of our customers. Our NW Natural renewables team, which we believe to be the first of its kind in the U.S., is continuously pursuing contracts and establishing long-term relationships with RNG producers, developers, and feedstock owners.

NW Natural advanced the company's RNG strategy on multiple fronts in 2022:

- Our first biogas facility began flowing RNG to heat homes and businesses. The RNG is produced from waste at a meat-packaging plant through a [partnership](#) with Tyson Foods. NW Natural is the first local gas distribution utility in the continental U.S. to invest in and own an RNG facility on behalf of its customers.
- We completed the bulk of construction of a biogas facility at a second Tyson processing plant.
- The Metropolitan Wastewater Management Commission in Eugene became the first wastewater facility in Oregon to produce RNG, and we partnered with the commission to inject the RNG into our system—the first wastewater interconnect in Oregon.  [Watch a video about the project.](#)
- We issued our third request for proposals (RFP) for RNG resources, which attracted bids representing about 17% of NW Natural volumetric sales in Oregon.
- In the first year of our 21-year [agreement](#) with the RNG producer Archaea Energy Inc., we helped support the development of RNG projects while generating revenue from those projects in high-value RNG markets and returning that revenue to our customers.²⁵

²³ Oregon Department of Energy, Biogas and Renewable Natural Gas Inventory SB 334 Report to the OR Legislature, 2018

²⁴ S&P Commodity Insights - [US RNG Approaches Maturity As Lenders Eye 50% Production Growth By 2024](#)

²⁵ Under Oregon law, NW Natural is able to develop RNG projects and either transport the RNG directly to our customers or sell it and detach the environmental attributes to be used for our customers' benefit.

Oregon Senate Bill 98 supports volumetric RNG targets

2025 10%	2030 15%	2035 20%	2040 25%	2045 30%
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TAKING THE LEAD ON RNG

NW Natural is a member of the Coalition for Renewable Natural Gas, a member-led nonprofit representing nearly 300 companies, municipalities, universities, and organizations dedicated to advancing RNG through policy and education. The coalition's Sustainable Methane Abatement & Recycling Timeline is an initiative to capture and control methane from 43,000+ organic waste sites in North America by 2050. NW Natural director of renewable resources Anna Chittum served as chair of the coalition's Leadership Advisory Board for Advocacy in 2022.

NW Natural is also a member of the American Biogas Council, a national trade association representing the entire U.S. biogas industry and dedicated to maximizing the production and use of biogas from organic waste.

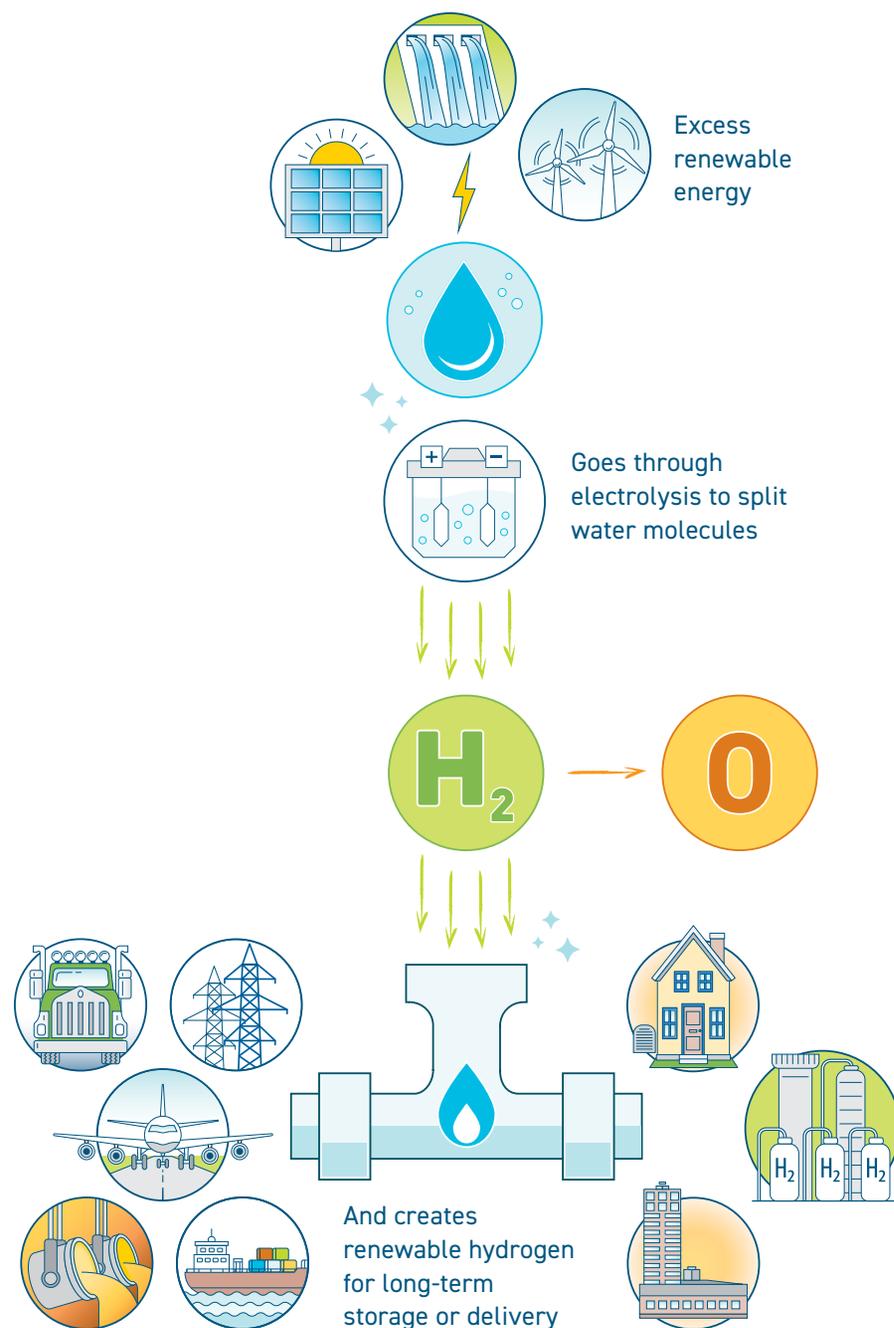
Mary Moerlins, NW Natural director of environmental policy and corporate responsibility, served in 2022 as vice chair of the American Gas Association's Climate and Sustainability Committee, which champions renewable development and leveraging the pipeline delivery systems for a decarbonized future.

Hydrogen: The Next Milestone on Our Low Carbon Pathway

Clean hydrogen²⁶ is a key piece of our vision to achieve carbon neutrality. It's a versatile fuel at the point of use and can be blended with natural gas in our existing pipelines to help decarbonize the gas system. Hydrogen is made in a range of ways that result in lower emissions than conventional methods. It can be created using renewable electricity, renewable biofuels, and natural gas paired with carbon capture and sequestration. We see significant opportunities for bringing hydrogen into our energy mix at a large scale.

Hydrogen is key to decarbonization

- Hydrogen has zero CO₂ emissions at the point of use.
- Conventional natural gas can be blended with hydrogen in existing natural gas pipelines to reduce emissions and scale supply quickly.
- Hydrogen can be stored on a large scale for long periods of time for delivery when it's needed, adding stability and resilience to the energy system.
- Surplus electricity from wind and solar can be used to produce hydrogen, which can be stored.
- Hydrogen can be produced from diverse domestic resources, contributing to energy independence.
- "Hard to abate" sectors that currently rely on fossil fuels for high-temperature energy and other specialized requirements can be decarbonized with hydrogen.



²⁶ Defined in the 2022 Inflation Reduction Act as "The term 'qualified clean hydrogen' means hydrogen which is produced through a process that results in a lifecycle greenhouse gas emissions rate of not greater than 4 kilograms of CO₂e per kilogram of hydrogen."

Our hydrogen projects

Using blended hydrogen in our own facilities

After several years of initial testing, in 2022, we stepped up our hydrogen blending efforts to 15% to heat NW Natural's resource center and training facility in Sherwood, Oregon, the first facility in the state to receive blended hydrogen. We also tested the 15% blend on end-use equipment like furnaces, fireplaces, and water heaters. Today we're working on blending at 20% levels.

Countries like the Netherlands, United Kingdom and Germany have been testing 20% hydrogen blending for some time. In fact, industry tests in Europe are now going beyond 20% blends to test the efficacy of higher volumes of hydrogen in the existing gas system and equipment. Our engineering team is following this work closely as we contemplate next steps to prepare our system for a hydrogen future.

Generating hydrogen for our pipelines

In 2022 NW Natural formed a partnership with Seattle-based Modern Hydrogen to generate hydrogen on-site at our facilities.

Modern Hydrogen's groundbreaking technology is designed to strip the carbon from natural gas and turns the decarbonized gas into hydrogen at the point of use, without the need for new infrastructure or storage. This process—called methane pyrolysis—is designed to produce hydrogen and solid carbon as outputs, and the carbon can be sequestered or used to make products such as asphalt, construction materials, automobile tires and soil amendments ([see a video about the technology](#)). Unlike other hydrogen production methods, Modern Hydrogen's technology requires no electricity or catalysts. Generating the hydrogen on-site reduces supply-chain risk and eliminates fuel transportation.

Unprecedented support for hydrogen

Policymakers across the globe are backing hydrogen as essential to achieving energy security and carbon neutrality. More than 30 countries have policies for creating a stable domestic source of hydrogen, with large-scale projects in progress from Western Europe and Australia to Kazakhstan and Mauritania. In 2022, the European Commission put forward a plan to fast forward the transition to cleaner energy, including a "[hydrogen accelerator](#)" concept to scale up the deployment of renewable hydrogen.

In the U.S., some utilities are already delivering hydrogen blends through natural gas pipelines. Hawai'i Gas has been using up to [15% hydrogen](#) in its distribution system since the 1970s, and New Jersey Natural Gas Co. recently completed the first [project](#) on the East Coast to inject renewable hydrogen into gas distribution pipelines and begin flowing it to customers. Gas utilities have more than two dozen hydrogen [projects](#) planned or

underway nationwide. On the research and development side, SoCalGas has built a demonstration [hydrogen powered microgrid and home](#) that converts solar energy into hydrogen, which is blended with natural gas and used in the home's heat pump heating, ventilation and air conditioning unit, water heater, clothes dryer and gas range. SoCalGas is leading an ambitious initiative to develop the nation's first [hydrogen hub](#), which could deliver hydrogen in an amount equivalent to almost 25% of the natural gas it delivers today.

"Repurposing natural gas pipelines for the transmission of hydrogen can cut investment costs 50-80%, relative to the development of new pipelines."

— IEA [Global Hydrogen Review 2022](#)

NW Natural is working with technical partners to determine how to convert our large industrial customers from natural gas to pure hydrogen. We have evidence it can be done, because there are 1,600 miles of hydrogen infrastructure already operating successfully in the U.S. today.

The U.S. is investing in clean hydrogen

Federal initiatives have created new potential for accelerating the deployment of hydrogen in gas distribution systems. In August 2022, U.S. lawmakers included a lower-carbon hydrogen production tax credit in the Inflation Reduction Act, the nation's largest-ever investment in cleaner energy. Additionally, the U.S. Department of Energy advanced a plan to invest \$8 billion to develop several regional hydrogen hubs. The DOE's [Hydrogen Shot](#) program, launched in 2021, aims to accelerate breakthroughs in hydrogen technology and cut the cost of hydrogen by 80% in one decade, to \$1 per kilogram. The department projects that if Hydrogen Shot goals are achieved, they can lead to a fivefold increase in hydrogen use.²⁷



Collaborating on hydrogen

The transition to hydrogen will require broad support and investments in best practices and science-based research. We're active in the following groups: Renewable Hydrogen Alliance (NW Natural is one of five founding members), Center for Hydrogen Safety, Low-Carbon Resource Initiative, and HyReady. We're partnering with other North American utilities to map out the technical tests we need to do at different blending percentages and share the learnings gained through hydrogen pilot projects. NW Natural is also working with peers in the U.S. and Canada to develop a [North American plan](#) similar to the European Hydrogen Backbone, which envisions developing a 23,000-kilometer hydrogen grid across Western Europe by 2040.

Meeting with global renewable energy leaders

NW Natural technical teams joined Oregon and Washington state policymakers on two fact-finding trips to Denmark in 2022 to understand how that country is implementing RNG and hydrogen strategies. Denmark is a leader in the production of biogas in Europe, and the Danish government has secured EU funding to build capacity for producing six gigawatts of renewable hydrogen by 2024—equivalent to more than 18 million solar panels. Rather than dismantling its gas system, Denmark is looking at [installing more pipelines](#) and repurposing existing gas lines. During the visit, the NW Natural team repeatedly heard from government agencies, think tanks and gas companies that Denmark is relying on multiple energy sources to decarbonize, including RNG, hydrogen, and renewable electricity. Molecules play an important role in the country's energy system today, and Denmark is doubling down on pipeline infrastructure, with plans in development for a hydrogen backbone transmission system.

²⁷ US Department of Energy, Energy Earth Shots: Hydrogen Shot: An Introduction, 2021



The Gas System Delivers What We Need for a Cleaner Energy Future

Leveraging our existing natural gas system in new ways is our priority. We are seeking paths to a renewable energy future with long-term dependability, resilience and affordability.

A coordinated energy system: Two systems are better

To meet the needs of our communities and decarbonize the energy system, our region will need an integrated portfolio of diverse lower-carbon energy sources, delivered through pipelines as well as wires. A diversified energy system is fundamentally stronger and more affordable—and diversification will be even more important as climate change and severe weather pose new risks to reliability and resiliency.

- **Continued reliability:** During winter peak-demand periods, the natural gas system in Portland, Oregon, delivers about twice as much energy as the electric system to residential customers. The gas system is critical for energy reliability in a region where the electric grid already faces serious capacity limitations.²⁸ In the future a gas system with renewable molecules can complement electric renewables, adding stability to the entire energy system.
- **Capacity and cost:** NW Natural delivers 50% more energy than any other utility in Oregon.²⁹ To handle that load without the gas system, the electric system would need to increase substantially, requiring intense investment to build new transmission and distribution lines and deploy batteries for storing renewable energy. That would come with a high price tag, and the investment in batteries to store renewable energy would drive the cost even higher. Meanwhile, the infrastructure for RNG distribution exists today.
- **Community impacts:** Some natural gas appliances and generators can operate in a power outage and can operate on RNG, providing critical energy resiliency benefits during extreme temperatures. Efforts to mandate electric equipment would eliminate optionality and create new energy system reliability risks.
- **Challenging sectors:** One of the world's biggest climate challenges is decarbonizing fossil energy uses that cannot be electrified. Among these so-called "hard-to-abate" sectors are major industries that rely on fossil fuels, including steel, cement, chemicals, and building materials, which together are responsible for approximately 30% of the world's annual CO₂ emissions.³⁰ RNG and hydrogen could fuel these sectors in the future.

- **Current state of electric generation:** Electric utilities are the biggest users of natural gas in the U.S., and they currently rely heavily on natural gas to back up renewables that provide intermittent energy for power generation. For the foreseeable future,³¹ cities are likely to be using natural gas for direct heating in homes and businesses or using it less efficiently to generate electricity in power plants where energy is lost during electric generation and transmission.

"An energy system with renewable electrons delivered over wires and renewable molecules delivered underground gives our communities a more effective hedge against potential risks posed by more extreme weather, and a more cost-effective way to reduce emissions."

— Kimberly Rush, NW Natural
Senior Vice President and Chief Operating Officer

Unmatched storage capacity

As the world transitions to decarbonized energy systems, long-duration storage of renewable energy will be critical. Our natural gas infrastructure already provides a massive, long-term storage resource that makes it possible to deliver energy on demand to customers all year long. We envision that in the future, the storage facilities we currently have in place could be used to store RNG or hydrogen. Leveraging these unique assets can have significant benefits for decarbonization strategies across the energy sector because:

- The gas system in the U.S. can deliver 2.5 times the energy of hydrogeneration facilities³² and gas storage provides about 1,500 times the energy from current large-scale utility batteries.³³
- Gas storage facilities can make it possible to provide renewables at a significant cost advantage when compared to the battery storage that would be needed to decarbonize the electric grid.

²⁸ Northwest Power and Conservation Council, 2019 <https://www.nwcouncil.org/energy/energy-advisory-committees/resource-adequacy-advisory-committee>

²⁹ Per data from the Oregon Public Utility Commission, 2021 Oregon Utility Statistics Book

³⁰ Harvard School of Engineering & Applied Sciences - [Clean Hydrogen: A long-awaited solution for hard-to-abate sectors](#)

³¹ [Global gas outlook to 2050 | McKinsey](#)

NW Natural currently has 20 billion cubic feet of underground storage—equivalent to the capacity of a battery that would cost about \$2 trillion in today's market.³⁴

- A large power-to-gas hydrogen plant can enable renewable energy storage in the gas system for less than half the cost per kilowatt hour of a battery storing the same energy.³⁵
- The gas system can help protect customers from service interruptions as the demand for energy continues to grow and the electric distribution system relies more heavily on weather-dependent renewables like solar and wind that deliver an intermittent supply of energy. NW Natural's existing storage can hold 6 million MWh of energy that can be delivered whenever it's needed.

Resilience

In the coming decades the U.S. energy system will need to be resilient to an increasing number of catastrophic events. The natural gas system's underground infrastructure is less vulnerable than above-ground systems to hurricanes, fires, winter storms, and other extreme events associated with climate change. This ability to withstand disruption will be needed for the transition to a carbon-neutral future, along with the flexible, large-scale storage the gas infrastructure provides. To ensure resilience, the energy system needs pipeline delivery infrastructure and storage capabilities meeting both short- and long-duration needs.³⁶

³² Source: EIA Weekly Natural Gas Storage Report - Withdrawals are calculated and aggregated from a weekly regional report. The figure for hydroelectric generation is the total net generation from hydroelectric facilities and does not distinguish between what can and cannot be stored.

³³ Source: EIA 923 Form - Hydroelectric and battery generation are pulled from generator level data identified with prime movers "HY" and "BA", respectively. Net generation is aggregated for hydroelectric generators and gross generation is aggregated for batteries.

³⁴ Prices based on NREL <https://www.nrel.gov/docs/fy19osti/73222.pdf>. That's equivalent to about 6 million megawatt hours of storage. To convert natural gas volumes to MWh for comparison, this figure uses a national average heat content of 1036 btu/cf and a direct energy conversion of 0.29307 MWh/MMBtu

³⁵ NREL - <https://www.nrel.gov/docs/fy19osti/73222.pdf>

PNNL - https://www.energy.gov/sites/prod/files/2019/07/f65/Storage%20Cost%20and%20Performance%20Characterization%20Report_Final.pdf

Caltech source [published in Joule] - [https://www.cell.com/joule/pdfExtended/S2542-4351\(20\)30325-1](https://www.cell.com/joule/pdfExtended/S2542-4351(20)30325-1)

³⁶ 2021 American Gas Foundation/Guidehouse report, Building a Resilient Energy Future



What would it take for electricity to meet residential gas use on a peak winter day?

December 22, 2022, was a cold day—it was a record send-out day for NW Natural. Between 8–9 a.m., NW Natural delivered approximately 41 million cubic feet of gas, of which about 23 million served our residential customers. NW Natural commissioned a consulting firm to help estimate what it would take for our local electric system to serve that same customer load for just that one hour. The preliminary analysis found that if all our residential customers' appliances were replaced with electric ones, it would require more than 3.4 gigawatts of new electric capacity to provide the same energy our system did.

To put this amount of energy into perspective, it's equivalent to seven new 450-megawatt natural-gas fired power plants, which would cost roughly \$4 billion to build. But by state policy, new gas power plants are likely very challenging to build in the Northwest, so we wanted to also explore what it would take with only electric renewables.

To rely on a combination of wind, solar, and battery storage would require about 14 GW of new capacity at a cost of approximately \$20 billion—and that's using National Renewable Energy Lab (NREL) and Berkeley National Labs capital cost data (not including any potential incentives from the Inflation Reduction Act). Based on NREL estimates, it would also require about 700 square miles of land to build all that new infrastructure on. Importantly, these estimates don't include the incremental electric transmission and distribution system costs or the cost to change out end-use appliances.

This example illustrates the value of the natural gas system for providing reliable energy to our communities when they need it the most.

Polling shows Northwest voters want a decarbonized pipeline

A poll conducted in late 2021 in NW Natural's service territory by the independent research firm DHM shows citizens in Oregon and Southwest Washington want a diversified set of solutions for decarbonizing the energy system. Survey respondents overwhelmingly said they want access to all forms of renewable energy—including renewable natural gas.

78%

voters value the natural gas system for its critical role in lowering emissions with both affordability and reliability as top priorities.

78%

of voters support local government's efforts to encourage the use of renewable natural gas.

73%

of voters agree that families and businesses should have a choice of energy options to meet their needs and not have those choices mandated by their local government.



Public Policy Support

The effort to decarbonize the electric grid has depended on public policy that supports the development of renewable power sources, and policy is equally important in decarbonizing the gas system. We're actively advocating for thoughtful design of regulatory programs in Oregon and Washington state. We are excited about early steps such as Oregon SB 98 and Washington HB 1257, which creates a pathway for RNG, and we are also working toward additional policy support to accelerate the development of renewable energy for the pipeline and make it affordable for gas customers. At the federal level we partner with other utilities to support state and federal incentives for RNG and hydrogen.

Where We Go from Here

NW Natural is moving forward on multiple fronts to advance our vision of becoming a provider of carbon neutral energy. We're actively supporting the rapid development and deployment of solutions like gas heat pumps and water heaters that don't require electric ignition, hybrid systems and hydrogen-ready appliances and processing equipment. And we're aggressively pursuing the adoption of renewable fuels for the gas distribution system.

Energy equity

Our climate plans and actions are guided by our conviction that opportunity is found in new ideas and diverse perspectives. Our core value of caring includes principles of diversity, equity, inclusion and belonging, and that value is central to our vision of how NW Natural intends to contribute to a future where everyone in our region has access to lower-carbon, reliable energy.

It is critical that customers, communities and other stakeholders take part in discussions and decisions about transforming the energy system. That's why in 2022 we launched a [Community and Equity Advisory Group \(CEAG\)](#) to bring historically underrepresented voices, perspectives and lived experiences to our energy and operational planning. One of the group's important functions is to provide NW Natural with direct feedback to help us drive toward carbon neutrality in a way that leaves no one behind. We seek input from this group on matters such as energy system planning, renewable resource development, and keeping the energy we deliver affordable so those we serve are not energy burdened.

We also have an employee-led Sustainability and Equity Engagement Committee (SEEC) within the company that works with community-based organizations to help influence policy and promote adoption of environmentally and socially sustainable practices.



What's next

Our nation is at the beginning stages of developing renewables for the gas system. As the electric system works to increase wind and solar generation from 13.6% in 2022, we need to aggressively accelerate development of renewables for our pipeline networks. We're pleased with the progress we've made at NW Natural, and we're continuing to build on our long history of success—channeling the advantages of our modern infrastructure, our expertise, and our innovative spirit in support of Vision 2050: Destination Zero.

Environmental Stewardship Is A Priority Within Our Organization

Our values are reflected in our operations, at our facilities and through policies and procedures that are designed to protect our environment as we serve customers.

Energy-efficient facilities

All newly constructed or remodeled NW Natural facilities are built with environmental stewardship, seismic resiliency, and employees' health and wellness in mind.

Our headquarters and operations center in Portland is LEED Core and Shell Gold certified, meeting the U.S. Green Building Council's rigorous standard for healthy and sustainable buildings. A range of features allow us to use less energy, conserve natural resources, minimize waste and support our strategic goals:

- **Energy conservation measures** – Through our high-efficiency building envelope (wall, roof and window assemblies), efficient heating, ventilation and air-conditioning system and controls, 100% LED lighting and other measures, we estimate energy cost savings for the building's core and shell of approximately 28% annually, compared to a code-compliant building—more than 550,000 kilowatt hours and approximately 8,000 therms of natural gas saved.
- **Water savings** – Efficient plumbing fixtures that use approximately 40% less water than code-compliant fixtures reduce water demand, along with a drip irrigation system to efficiently water native plants on our rooftop deck. In 2022, we used approximately 463,760 gallons of water.
- **Use of green building materials** – Nearly 21% of the materials cost for the building core and shell construction came from recycled materials, reducing environmental impacts of extracting and processing virgin materials.
- **Convenient downtown location** – Our headquarters are conveniently located in our downtown core within walking distance of transit stops for public bus lines, light rail and the streetcar. We provide secure and indoor bicycle parking to further encourage sustainable transportation alternatives and reduce pollution from automobile use.
- **Onsite recycling and composting** – To limit waste, each floor is equipped with central recycling and compost stations.



CORE AND SHELL GOLD CERTIFIED

Our building supports employees' health and wellness with an onsite wellness center, locker room and indoor bike parking, ample daylight in work areas and access to the outdoors and nature on our rooftop deck.

Lower-carbon operations

NW Natural implemented its own company-wide goals to achieve net zero emissions across our company's operations, including our fleets and facilities.

- In 2022, NW Natural used approximately 13.5 megawatt hours of electricity and 5.8 million therms of natural gas in our own operations.
- For our use of natural gas, we pay for carbon offsets through our Smart Energy program. We became our first Smart Energy customer when the program launched in 2007, and since 2020 we've offset 100% of the CO₂ associated with our natural gas heating.
- We are part of the Energy Trust of Oregon's [Strategic Energy Management program](#), which helps us continually improve our own operations through equipment and building choices as well as employee behavior. In 2022, we expanded our involvement in the program to now include six enrolled facilities, up from three in 2020.
- We are examining additional renewable electricity program options, and we expect to use increasing amounts of renewable natural gas in the future as we continue to procure RNG under Oregon Senate Bill 98.
- We continued our expanded recycling programs which now includes a personal protective equipment recycling program and a plastic film recycling program at certain NW Natural locations. This is in addition to our long-standing programs for recycling hard plastics and fabrics. Employees can also give new life to NW Natural logo wear through the Spring Cleaning Clothing Swap.

- We celebrated Earth Month 2022 with two lunch-and-learns and a SOLVE neighborhood cleanup day. Sponsored by NW Natural’s employee-run Sustainability and Equity Engagement Committee, these events emphasized the importance of ongoing engagement on sustainable landscapes, food justice and climate and energy.
- Our facility in Sherwood, Oregon received the Gold Level of the Washington County Green Business Leaders award, which recognizes a company’s efforts in sustainable materials management, toxics reduction and social responsibility. As we’re continuing to renovate and upgrade our facilities, we are inspired by LEED certification principles and focus on building resilient, energy-efficient structures that serve the needs of our customers, employees and the business.
- We strive to use the lowest carbon fuel available for our fleet vehicles, including CNG, renewable diesel and ethanol. In 2022, all CNG consumed by our fleet was RNG.



Environmental policy and leadership

Our board, executives, employees, and customers have been committed for decades to environmental performance, protection, and stewardship. Our dedicated environmental management and sustainability team focuses daily on these issues, and reports to our VP of public affairs and sustainability, who reported directly to our CEO. The sustainability team provides direct monitoring of our environmental performance, reports regularly on environmental issues and consults with stakeholders on these issues.

Board meetings for both NW Natural Holdings and NW Natural incorporate environmental items, risks and opportunities into the topics reviewed, including climate-related risks and opportunities. The Public Affairs and Environmental Policy Committee of the boards of directors provides oversight of environmental matters. The committee is guided by the company’s environmental policy, which is reviewed and approved annually. It sets forth our commitment to:

- Environmental stewardship
- Reducing emissions, releases, and waste
- Using our natural resources and energy more efficiently
- Protecting and enhancing the quality of the natural environment
- Operating our business in an increasingly sustainable manner

Environmental management, biodiversity, land, water, and non-GHG emissions

To help us use our precious resources wisely and efficiently, we have strong environmental programs.

Environmental management: With one of the most modern natural gas distribution systems in the country, in a well-established service territory, NW Natural performs a limited amount of new construction or other work that might disrupt local communities and the environment, including waterways. When work is required, our environmental management team strives to comply with all environmental regulations and leave the area the same as, or better than, it was when we began. Our environmental management program is supported by:

- Our rigorous procedure manual, which provides guidance on environmental matters. This includes EPA, Oregon Department of Environmental Quality (DEQ) and Washington Department of Ecology (DOE) regulations and local jurisdictions’ requirements. In certain instances, we take the strictest regulation within our jurisdictions and apply it to our entire service territory, which assists us in holding ourselves to a higher standard and facilitates consistent procedures across our operations.
- Our internal Environmental Management System (EMS), which addresses how our resource centers and field work sites are designed and operated. The EMS procedure manual:
 - » Outlines how to design sites to prevent runoff and soil erosion, mitigate spills, obtain necessary Clean Water Act permits, and follow federal, state and local rules and regulations. These rules and regulations are primarily related to water quality, air quality, chemical handling, spill response, waste, cultural resources and threatened and endangered species.
 - » Serves as a guide for rigorously vetting products, substances, activities and services to help us minimize our impact on the environment and use the safest and most environmentally responsible materials appropriate in our operations. We keep environmental records and provide environmental training for each project, and we offer awareness programs and trainings for new employees and refresher trainings for established employees.
 - » Allows us to assign roles and responsibilities, as well as monitor activities for compliance with our permits. Our internal audit department performs periodic audits of our environmental programs and trainings, and external agencies such as EPA, DEQ and DOE also periodically audit our permitted facilities.

- Our team of in-house environmental specialists who oversee all waste assessments. The environmental specialists:
 - » Participate on a chemical evaluation safety team to eliminate products that may produce potentially hazardous waste before it's generated, and they periodically perform waste audits at our resource centers.
 - » Each have over ten years of experience managing waste stream assessments.
 - » Have completed OSHA's 40-hour "hazwoper" certification.
 - » Attend annual waste management training seminars hosted by the Oregon DEQ.
 - » Implement several written environmental modules directed at managing commonly occurring waste streams.
 - » Identify opportunities for continued improvement.

Waste: We strive to reduce and recycle any byproducts of our process by:

- Performing waste audits at all our resource centers.
- Implementing and maintaining recycling programs in our operations. We currently recycle 100% of the following items: batteries, waste oil from our fleet transportation, oil filters, antifreeze, scrap metal, and some types of plastic. NW Natural's recycling activities in 2022, eliminated over 88% of the total volume of total ordinary operating waste potentially requiring disposal and diverted those materials into recycling opportunities instead.
- Diligently following EPA's rules and regulations for hazardous waste. We report to the state government the amount of hazardous waste that is incinerated or sent to the landfill annually. In addition to materials recycled in 2022, NW Natural disposed of materials from ordinary operations as well as remedial-site wastes. Of the ordinary operational waste that was disposed; 99% was non-hazardous waste (100% landfilled and 0% incinerated) and 1% was hazardous waste (6% landfilled and 94% incinerated).

Water: While our natural gas distribution operations are not water intensive, we strive to adhere to all Clean Water Act requirements, and we use limited water for hydrostatic testing and pipeline construction. We also repurpose water, use leading stormwater-management techniques and conduct regular audits at construction sites.

Air: We work to promote healthy air quality in several areas.

- We have invested in five CNG stations for our own fleet, which includes 198 vehicles.³⁷ A station at our Sherwood Service Center is designed to provide backup service for our CNG customers. We strongly believe that natural gas as a transportation fuel provides significant economic and environmental benefits to our customers and to the overall community. For example, heavy-duty vehicles that run on CNG rather than diesel emit 90% less nitrogen oxide (NOx) air pollutants and particulate matter.

³⁷ As of August 2023

- We also have an idling-reduction initiative aimed at reducing particulate emissions. Emissions such as sulfur oxides (SOx), NOx, and non-methane volatile organic compounds (VOCs) are below applicable permitting thresholds for the majority of our facilities and as such, we do not consider them to be significant to our operations.

Suppliers

In addition to our efforts to procure RNG and target gas purchases from more environmentally conscious producers, we have similar criteria for vendors we work with:

- We have implemented a sustainable purchasing program covering various focus areas, including sustainability, community, and governance. We strive to procure goods and services in an increasingly sustainable manner and we expect our suppliers to share our core value of environmental stewardship through our Supplier Code of Ethics.
- Our Supplier Code of Ethics contains expectations for our suppliers related to environmental protection and sustainability. We also include language setting expectations for environmental stewardship and sustainability in our master contracts and agreements, and we have launched a website specific to suppliers that allows them to better understand how we promote sustainable procurement efforts.
- We monitor key vendors' environmental records and we have implemented a scorecard for certain vendors that addresses identified sustainability-related topics, including environmental performance.
- As part of our RFP process, we include in our bid evaluations the extent to which contractors demonstrate their willingness to work together on finding ways to reduce environmental impacts, and we ask prospective suppliers to describe their current or planned practices for utilizing recycled products and minimizing waste.



For more information see also:

[Less We Can](#)

[Renewable Natural Gas](#)

[Vision 2050: Destination Zero](#)

[Public Affairs and Environmental Policy Committee](#)

[Environmental Policy](#)

Our Communities, Our Customers

WE GREW UP HERE

We've operated for over 160 years with a focus on serving our customers and investing in our communities. It's not just what we do, but how we do it.



Community & Customer Highlights



CONTINUED TO RECEIVE TOP-LEVEL CUSTOMER SATISFACTION SCORES IN J.D. POWER AND ESCALENT STUDIES

Kept customer bills lower than they were 15 years ago by judiciously managing system capacity and skillfully navigating record volatility in the natural gas market



DISBURSED \$5.2 MILLION

to help low-income customers pay their bills and stay warm

DISTRIBUTED A RECORD

\$40 MILLION

in bill credits to Oregon customers



DONATED \$1 MILLION

to local nonprofits, with an emphasis on organizations that demonstrate a commitment to diversity, equity and inclusion



DISTRIBUTED \$2.3 MILLION

to fund weatherization projects and energy efficiency upgrades for low-income customers in Oregon



PROVIDED 8,300 MEALS AND 174 TENTS for events held by our nonprofit, community and civic partner organizations



Introduced a program to provide an ongoing bill discount for income-qualifying residential customers



Launched a Community and Equity Advisory Group to help ensure NW Natural programs and policies are informed by voices representing diverse communities

Caring for Our Customers

Superior service and customer satisfaction

In 2022, our customer service center answered nearly 524,000 calls, and our service technicians and other field resources responded to more than 190,000 requests. Our internal customer satisfaction survey continued to show high satisfaction ratings³⁸ among contacted customers:

	OVERALL	STAFF INTERACTION	PHONE	SERVICE TECH
2022	80.2%	90.0%	83.9%	96.2%
2021	83.5%	91.2%	86.2%	96.2%
2020	77.1%	89.0%	86.3%	92.9%

Top two in J.D. Power Customer Satisfaction Study for 19 years

In 2022, NW Natural continued its nearly two-decade streak of earning high marks from our customers in the J.D. Power Gas Utility Residential Customer Satisfaction Study. For the third year in a row, the company scored second-highest in customer satisfaction among large utilities in the West. This is the nineteenth time the company has scored in the top two in the West regional segment, which includes utilities serving 500,000 or more residential customers. NW Natural also scored in the top 10 in the nation among large gas utilities. The J.D. Power study measures residential customer satisfaction with natural gas utilities across six categories: safety and reliability; billing and payment; price; corporate citizenship; communications; and customer service.

Customer Champion in Escalent study

NW Natural earned the designation of West Region Customer Champion in the 2022 Syndicated Utility Trusted Brand & Customer Engagement™ Residential study by Escalent. The distinction in 2022 went to standout utilities that scored well above their industry peers for building engaged customer relationships and communicating with customers to help them find support in managing their energy use.

The Escalent study goes beyond J.D. Power customer-satisfaction scores to gauge the level to which customers want to do business with utility brands. It benchmarks and trends performance of the largest approximately 140 utilities on the Engaged Customer Relationship (ECR) score, a composite index of service satisfaction, brand trust and product experience performance. The sample design for conducting customer interviews is based on US census data to ensure a demographically balanced sample of each evaluated utility's customers based on age, gender, income, race and ethnicity.

³⁸ Percentage of customers rated us either 9 or 10 on a 10-point scale, where 1 means poor and 10 excellent.

"Our customers have always been the focal point at NW Natural, and it is particularly satisfying to once again receive such robust confirmation that they appreciate our commitment to service, safety and reliability."

— David Anderson, NW Natural CEO

A great customer experience on any device

Our core value of service includes making it easy for all our customers to get help and manage their accounts 24/7 from any location. We offer more than 30 self-service options online, with website accessibility features to serve a more diverse set of customers. Currently nearly 500,000 customers are registered for an online account that allows them to use a phone or other mobile device to do things like get their account information, view and pay their bill online, and find out about energy efficiency resources. In 2022 we saw an upsurge in adoption of self-service features:

- Registration for online accounts increased 23%.
- More than 300,000 customers have signed up for paperless billing, choosing to receive their bill electronically rather than through the mail. Enrollment increased by 10% in 2022, and today nearly 40% of our customers are enrolled for paperless billing. To further promote online transactions and paperless billing to conserve resources, during Earth Month in April we promoted paperless billing. We also promote paperless billing to customers throughout the year via their bills, print and electronic newsletters, and more.
- Online payments increased more than 8%, with nearly 5.9 million payments processed online.



Natural gas is one of the most affordable utility bills our customers have

Reductions in bills from 15 years ago



↓ 2%

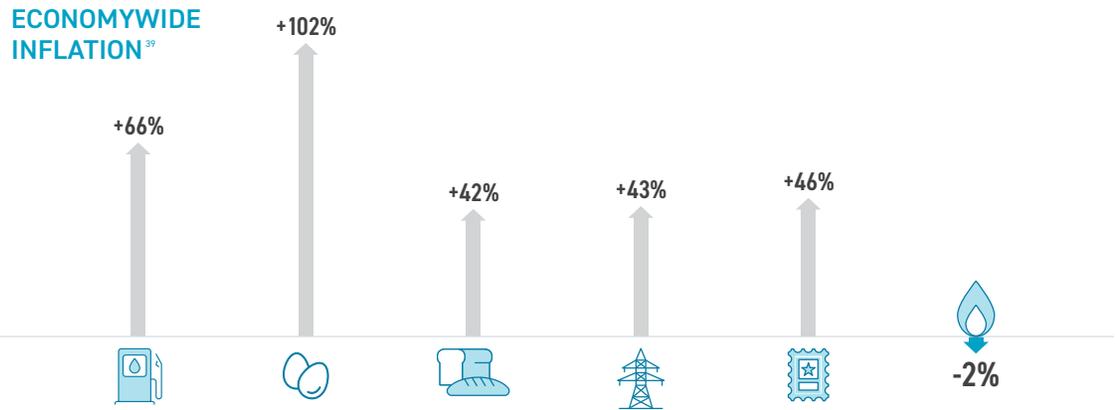
RESIDENTIAL BILLS



↓ 7%

SMALL COMMERCIAL BILLS

GAS BILLS REMAIN AFFORDABLE



The Portland metro area continues to be the most affordable major metropolitan area on the West Coast. Even with economywide inflation and increases in the wholesale price of natural gas, our residential and small-commercial customers are paying less for gas than they did 15 years ago. A typical monthly gas bill for a residential customer using 50 therms or 100 therms of gas delivered per year was \$51.65 and \$95.30 respectively. NW Natural has taken several steps to increase affordability,⁴⁰ including:

- Locking in gas purchases at lower rates
- Smart investments in energy storage
- Effective and efficient operations
- Energy efficiency measures



³⁹ National data from Bureau of Labor Statistics, U.S. Postal Service, and NW Natural bills 2022 vs. 2007.

⁴⁰ Affordability also depends on the wider economic dynamics of our service territory as well as the cost of the natural gas commodity.

⁴¹ Natural gas bill data for NW Natural customers from 11/1/21–10/31/22 using normal weather assumptions

⁴² Electric bill information uses rates for 2021 in NW Natural's service territory and data obtained from 2020 Oregon Public Utility Commission Stat Book (latest data available) and other regional sources for usage information

⁴³ Water and wastewater bill is from Bluefield Research U.S. Municipal Water & Wastewater: Annual Utility Rate Index, 2021. Oregon rates could differ from this.

⁴⁴ Cell phone bill data is from J.D. Power's 2022 U.S. Wireless Purchase Experience Full-Service Performance Study

RESIDENTIAL AVERAGE MONTHLY UTILITY BILLS

Natural Gas ⁴¹	Electricity ⁴²		Water & Sewer ⁴³	Cell Phone ⁴⁴
Gas Space & Water Heating	Has Gas Space & Water Heating	All-Electric Home	\$112	\$142
\$65	\$76	\$166		
\$141				

NW NATURAL GAS UTILITY STATS

Sector	Customers (as of 12/31/2022)	Gas Delivered (During 2022)		Natural Gas Rate (Weighted Average Rates from 11/1/21 - 10/31/22)	
		THERMS	MMBtu	VARIABLE RATE PER THERM	FIXED RATE PER MONTH
Residential	724,287	478,092,635	47,809,264	\$1.05	\$8
Commercial	69,139	288,499,121	28,849,912	\$0.95	\$24
Industrial	768	104,444,119	10,444,412	\$0.76	\$247
Transportation	303	381,300,739	38,130,074	\$0.11	\$880
TOTAL	794,497	1,252,336,614	125,233,662		

Caring for Our Communities

As an essential service provider and a key employer in the Northwest, we view caring for our communities as both a moral imperative and a sound business practice. We invest time and resources to benefit all the communities we serve—especially those facing social and economic challenges. Our customers and neighbors are key stakeholders in our business.



See a video about NW Natural's dedication to nurturing deep community roots and innovating for the future.

Community matters are overseen by the Public Affairs and Environmental Policy Committee of our board of directors. Our VP, chief public affairs and sustainability officer is the NW Natural executive tasked with primary responsibility for government affairs and community involvement.

Stakeholder engagement

We value our community stakeholders, and we actively seek a broad range of perspectives in our decision-making processes. Our senior management and board of directors use feedback received through our various outreach activities to help inform business strategy and decisions.

Our community of stakeholders starts with our employees and extends to our customers, business partners, suppliers, organized labor unions, shareholders, lenders, financial analysts, regulators, government officials, community leaders, the media and nonprofits and other organizations. Our Human Rights Policy sets forth our public commitment to work to engage with these groups where appropriate to better enable us to listen to, learn from, collaborate with and incorporate the views of stakeholders into our business.

As a regulated utility, we remain transparent through regular public meetings, workshops and proceedings before the public utility commissions in the states where we do business. Approximately every two years, we develop our integrated resource plan (IRP), which describes how we plan to meet our customers' energy needs now and in the future while fulfilling our commitment in helping the region reduce its impact on the climate. The IRP is developed through a process open to the public, informed by feedback, reviewed by a diverse set of interested parties, and ultimately filed with the public utility commissions that regulate our business. In September 2022, we filed our Integrated Resource Plan with Oregon and Washington state regulators and went through a comprehensive engagement process with stakeholders that was open to the public.

Service ethic is one of our core values, and one way we foster this value is by engaging regularly with customers and community members through satisfaction and opinion surveys, along with our website, newsletter and social media channels. Our government affairs team regularly solicits feedback from governments, legislators, nonprofit organizations and community members on important issues, trends and policies so we can be responsive to the communities we serve. We also engage with our communities through partnership, programs and philanthropic support of nonprofit organizations that provide essential services. In 2022, we continued our direct engagement with nonprofits that serve our low-income community and customer needs.

We aim to be the employer of choice and regularly engage with employees through a wide variety of channels such as internal and external websites, meetings and events, communications and surveys, including our annual engagement survey that is designed to enable company leaders to gather valuable feedback and guidance from employees. In 2022, we continued to engage in "pulse" surveys and other means in order to attend to employee concerns. We have a hotline, maintained by a third party, available for our employees, our communities or anyone else to anonymously raise concerns.

Our notable engagements in 2022 included:

- Participated in ongoing policy, renewables project and climate action planning discussions at the federal, state and local level, and worked with elected officials, community leaders and nongovernmental organizations to share our low carbon pathway goals and pipeline decarbonization strategies.
- Maintained an online customer survey and digital platform to engage with customers on our Low Carbon Pathway. Through this process, customers who have a greater interest in these issues can receive updates from the company and are provided with more opportunities to engage with NW Natural and with policymakers as part of an ongoing dialogue and feedback loop.
- Dedicated staff allowed us to increase capacity and focus on growing community engagement. They worked with partners to continue to improve participation in low-income and community serving programs and to increase responsiveness to complex needs of front-line communities.
- Continued funding and enhanced community outreach on arrearage management resources, including partnering with community organizations to reach populations experiencing hardship during COVID-19.
- Developed partnerships with local Community Action Agencies to increase awareness of low-income assistance and weatherization resources.
- Attended more than 115 events and directly engaged with individuals on topics ranging from natural gas safety to renewable energy education.
- Established a Community and Equity Advisory Group to better incorporate underrepresented voices into our processes and programs, in keeping with

NW Natural's commitment to improving energy equity and easing the energy burden for low-income customers.

- In 2021, launched a website specific to vendors in furtherance of our efforts to engage with diverse suppliers and promote sustainable procurement. The effort has built momentum into 2023. We have doubled the number of diverse suppliers as a part of this sustainable purchasing program.

Supporting customers during COVID-19

As the pandemic continued to take a financial toll on many households in 2022, we focused on assisting customers who fell behind in making payments during the 18 months we suspended our normal disconnection practices to help the community through the pandemic. We provided flexible payment arrangements and offered new options for our customers and, in 2021, doubled the amount of time for customers to make payments through our Time Payment Agreement program (TPA) for Oregon, to 24 months. Our comprehensive outreach programs continued to inform customers in need about options for bill assistance, focusing on low-income, elderly, and non-native English-speaking customers. The Arrearage Management Programs for low-income residential customers in Oregon and Washington, introduced in 2021, provided up to 1.5% and 1% of its respective Oregon and Washington retail revenues to fund these programs and help customers reduce or eliminate past-due balances and avoid disconnection. The total amount provided and committed to customers through these programs was nearly \$9.4 million. The programs in both Oregon and Washington closed at the end of 2022. The Federal COVID-19 Public Health Emergency declaration ended on May 11, 2023.



PROGRAMS TO HELP OUR CUSTOMERS STAY WARM AND PAY THEIR BILLS

- [Bill discounts](#) for low-income customers
- Suspension of disconnections during severe winter weather events, prolonged periods of extreme cold, poor air quality, winter holidays and wildfires
- Flexible [payment options](#) to help customers keep up with current bills and reconcile account balances
- Time Payment Agreements (TPAs) that allow customers with past-due accounts to pay in installments and avoid disconnection
- A [Gas Assistance Program](#) that provides additional support for the most vulnerable low-income families and seniors in our communities
- Medical Certificate exemptions and TPAs for customers with medical conditions
- No-cost energy efficiency home improvements for income-qualified customers

Energy assistance for low-income households

Energy equity is central to our core value of caring, and we believe it is essential to the strength and well-being of the communities where we live and do business. We offer multiple financial assistance programs targeted at reducing gas bills for low-income customers, especially energy burdened households that spend a disproportionately high percentage of their income on energy costs.⁴⁵ Our low-income energy assistance programs distributed **\$5.2 million in energy assistance during the 2022 program year**⁴⁶—the largest distribution since the end of the 2008 recession, and the third-largest in more than two decades.

Bill discounts to reduce energy burden

Looking to provide additional resources for low-income households, NW Natural worked with a [diverse coalition](#) of stakeholders to help shape the [Oregon Energy Affordability Act](#)—historic legislation that for the first time allowed the Oregon Public Utilities Commission (PUC) to consider equity in the ratemaking process.⁴⁷ The bill passed in 2021 with the support of regulators and organizations representing utility customers, historically underserved communities and advocates for energy equity and climate justice. This cleared the way for NW Natural to launch our Bill Discount Program in 2022. The program provides income-eligible customers with ongoing discounts ranging from 15%–40%, in addition to other energy assistance customers may already be receiving. To qualify, households must be at or below 60% of the state median income level.

Recognizing that many financially eligible customers don't take advantage of energy assistance,⁴⁸ we sought stakeholder input on how to reduce barriers that have been shown to decrease participation—including lack of awareness, language barriers, application procedures and confusion about eligibility. The program design includes:

- Auto-enrollment of customers who have received energy assistance in the previous two years.
- Self-verification of financial eligibility.
- An intensive multilingual, multi-platform campaign to help community action agencies and organizations inform their clients of this new resource.

⁴⁵ Energy burden is defined as the percentage of gross household income spent on energy costs. According to DOE's [Low-Income Energy Affordability Data \(LEAD\) Tool](#) the national average energy burden for low-income households is 8.6%, nearly three times higher than for non-low-income households, which is estimated at 3%.

⁴⁶ The program year (PY) date range is October 1, 2021 to September 30, 2022, coinciding with the release of federal LIHEAP funds. Totals for 2022 include four temporary sources of additional federal Low-Income Energy Assistance Program (LIHEAP) funding that became available to states through emergency COVID legislation: the Coronavirus, Aid, Relief and Economic Security (CARES) Act, the Energy Assistance Coronavirus Relief Fund (EASCRF), the American Rescue Plan Act (ARPA), and the Oregon Emergency Rental Assistance Program (OERAP).

⁴⁷ [Oregon House Bill \(HB\) 2475](#), passed during Oregon's 2021 legislative session, allows the Oregon Public Utilities Commission to consider "differential energy burdens on low-income customers and other economic, social equality or environmental justice factors that affect affordability for certain classes of utility customers" when establishing rate classifications.

⁴⁸ <https://rmi.org/by-the-numbers-low-income-energy-assistance/>

40 years of helping low-income customers stay warm



NW Natural's Gas Assistance Program (GAP) turned 40 in 2022, and it was a birthday worth celebrating. Since its inception, the voluntary program has raised more than \$6.6 million to assist more than 60,000 of the most vulnerable low-income families and seniors in our communities. NW Natural customers, employees, retirees and shareholders all donate to the program, which supplements the support customers receive through federal and state energy assistance programs. A network of community action groups distribute the funds directly to those who need them most. Because NW Natural covers all administrative costs, 100% of the funds are donated to the recipients. In 2022, customers facing financial challenges received more than \$120,000 from GAP to cover their heating costs.

"Our Gas Assistance Program gives our partner agencies additional resources and flexibility to support customers when they need it."

— Mary Moerlins, NW Natural Director of Environmental Policy and Corporate Responsibility

Low-income needs assessment

We actively seek out income-eligible customers across our service territory to help them lower their gas bills. In 2022, we conducted our first low-income needs assessment (LINA) to better understand the low-income customer base in our region. Advanced Environmental Group (AEG), the third-party consultant we engaged, layered multiple data sources to identify areas of high energy burden. When the research was complete, customers who had a high probability of being eligible for income-based energy assistance received postcards to inform them of available programs. Going forward, the data will be used to help us target outreach efforts to connect with people in the highest poverty and energy burden areas.

Outreach

We want all our customers who qualify for payment assistance to take advantage of the resources available to them. That's why meaningful community engagement is a critical piece of our income-based programs. We work directly with community members and local community action agencies and organizations to get out the word about energy assistance funds. Our outreach strategy includes:

- Seeking community input to make sure we're reaching out to residents in a culturally competent way
- Producing communication materials in our service territory's five most commonly spoken languages
- Reducing barriers that prevent underserved communities from finding information and receiving energy assistance
- Maximizing the reach of our messaging through multiple communication channels, including our customer website, four social media platforms, monthly newsletters, emails and bill inserts.

In 2022 we created a Community and Equity Advisory Group (CEAG) that provides NW Natural with input to advance inclusive policies and actions in a range of important areas, including income-based and arrearage programs. Based on the group's feedback, we created an innovative communication strategy for the launch of our Bill Discount Program. The centerpiece of the strategy was an online [toolkit](#) that provides our partners with a variety of digital and printable content so they can choose what works best for their clients. We engaged with 250+ community-based partners to reach eligible clients through sources they already interact with, including housing authorities, social service agencies, houses of worship, government agencies, libraries and more than 835 schools.



Low-income energy-efficiency programs

Energy efficiency upgrades serve as a cost-effective strategy for reducing energy use and lowering utility bills, but these upgrades are often out of reach for people in communities most vulnerable to economic shocks such as rising housing costs, stagnant wages and high inflation rates. These communities are more likely to live in older, energy-inefficient housing and spend a disproportionately large percentage of their household income on energy. This reality is more pronounced in certain racially and culturally diverse households, who spend an average of 20% to 45% more of their incomes on energy bills than white households.⁴⁹

Our low-income energy efficiency programs in Oregon and Southwest Washington are assigned to make energy efficiency more equitable and accessible. Only customers who earn less than 200% of the [federal poverty line](#) (roughly \$55,000 for a family of four) are eligible for these programs. We work directly with community agencies and organizations to provide whole-home weatherization, efficiency upgrades and energy education. Through our community partners we distributed \$2.3 million of [Oregon Low-Income Energy Efficiency Program](#) (OLIEE) and [Washington Low-Income Energy Efficiency Program](#) (WALIEE) funds in 2022. To help address increased costs for energy-efficiency projects, we joined with our community partners and other advocates to obtain regulatory approval for a 25% increase in the Oregon program's per-dwelling expenditure limit.

⁴⁹ [Report](#) by the American Council for an Energy Efficient Economy, an independent nonprofit research organization that develops policies to reduce energy waste and combat climate change

Extending energy-efficiency home improvements to more low-income households

To provide energy efficiency assistance to a greater number of income-eligible households in NW Natural's Oregon service territory, OLIEE's Open Solicitation Program (OSP) extends support to qualified multiple-dwelling buildings and amplifies opportunities for certain types of dwellings and projects that fall outside the conventional OLIEE parameters. NW Natural's newest OSP investment will provide full energy retrofits for six buildings that house, shelter and care for approximately 320 low-income children, youth and adults with intellectual and developmental disabilities.⁵⁰ The buildings are owned and operated by Albertina Kerr, one of Oregon's leading social service organizations. Kerr will manage client engagement and resident care throughout the process. Oregon Energy Fund, Oregon's premier energy assistance nonprofit, is the project lead. National Association of Minority Contractors—Oregon (NAMCO), a nationally respected coalition of Black, Indigenous and other underrepresented trade workers, will serve as the onsite construction manager.

2022 ENERGY EFFICIENCY PROJECTS EQUAL SAVINGS FOR LOW-INCOME CUSTOMERS



165 OREGON DWELLINGS
SAVING OVER 58,000 THERMS OR 5,800 MMBTU



11 WASHINGTON HOMES
SAVING ABOUT 2,600 THERMS OR 260 MMBTU



20% REDUCTION
AVERAGE ANNUAL GAS USAGE REDUCTION

⁵⁰ All residents receive support through one or more federal programs including Medicaid, Supplementary Security Income (SSI), free/reduced government lunch, Bureau of Census definition of disability, and therefore meet OSP income eligibility qualifications.



Charitable Donations

Corporate philanthropy is an integral part of NW Natural's company culture and an enduring example of our core value of caring. Through our shareholder-funded Corporate Philanthropy Fund we gave nearly \$900,000 to more than 300 local nonprofits in 2022, with an emphasis on supporting youth and family resiliency. Funding also went to organizations focused on health and human services, environmental stewardship, and arts and culture.

Inclusion and belonging guide our charitable giving, and we're committed to working with the community to improve outcomes for people who face barriers based on racial, social, economic and geographic inequalities. We prioritize requests from organizations that demonstrate actions, programming and practices that align with a commitment to inclusion and belonging principles.

Spirit of Giving

Employees play an important role in NW Natural's efforts to give back to the community. Every fall, employees and retirees donate to their favorite local nonprofits through our Spirit of Giving campaign, and a 100% match from the shareholder Corporate Philanthropy Fund doubles the impact of their generosity. In 2022, employees gave over \$163,000 to local nonprofits and good causes, exceeding the previous year's number of participants and donations. Together with the company match, employees and retirees contributed nearly \$326,000 to local charities.

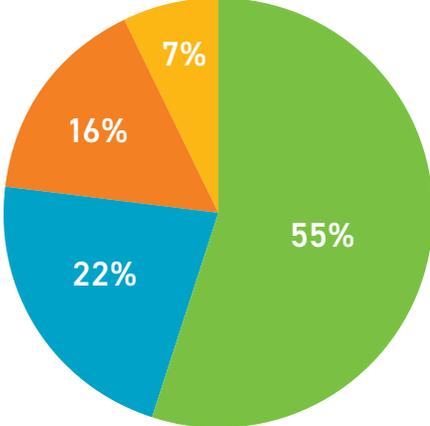
Top 10 Employee-Supported Nonprofits in 2022

The following top 10 organizations received the highest number of employee contributions in 2022 through the company's annual Spirit of Giving campaign:

1. Oregon Food Bank Inc.	6. Oregon Humane Society
2. Janus Youth Programs Inc.	7. United Way of The Columbia-Willamette
3. Casa For Children Inc.	8. Portland Rescue Mission
4. Path Home (formerly Portland Homeless Family Solutions)	9. Meals On Wheels People Inc.
5. Black United Fund of Oregon Inc.	10. Oregon Public Broadcasting

2022 CORPORATE CONTRIBUTIONS BY CATEGORY

- Families & Children in Crisis
- Youth Services & Education
- Environmental Stewardship
- Other



Dollars for Doers

Through our Dollars for Doers program, NW Natural makes financial contributions to the nonprofit organizations employees support with their time. The program, funded with shareholder dollars through the corporate philanthropy fund, is one of the ways NW Natural supports our culture of caring and the good work employees do in the community.



[Watch a video about Dollars for Doers](#)

28	Number of 2022 Dollars for Doers grants
7,584	Estimated Dollars for Doers volunteer hours in 2022
8	Average number of years Dollars for Doers volunteers have been engaged with their organizations



NW Natural's Volunteer of the Year wants to tell the story of all Oregonians

Darren Nakata's community leadership reflects his passion for history and education, as well as his deep roots in and commitment to the community.

Nakata, who is NW Natural's general counsel for NW Natural Water and NW Natural Renewables, is proud to serve on the Oregon Historical Society's (OHS) board of trustees and help make Oregon's collective history visible and accessible to all. He is passionate about the potential of the organization and its ability to educate by telling stories that encompass the voices of all Oregonians.

Nakata traces this commitment back to his own family history. During World War II, his father, an American-born U.S. citizen, lost everything he and his family ever had when they were removed from their home in Portland, Oregon and incarcerated—first in a horse stall, then in a makeshift prison camp in the Idaho desert for nearly four years. Nakata's father nonetheless went on to serve in the U.S. military and forge a successful career in international trade and finance. Finally, he built a second career teaching about his family's story, with the hope that educating Oregonians may better our collective understanding of the importance of constitutional rights and help prevent future injustices.

"My family's story is just one of many that make up Oregon's many-layered, rich and complex history," Nakata said. "OHS is tirelessly working to capture Oregon's incredible story, including shedding light on important new stories that have not been heard before."



Living NW Natural's core value of caring

As the Russian military invasion escalated in Ukraine in 2022, NW Natural pledged to match up to \$5,000 in employee donations to provide shelter, food, water, and medical supplies and services. Dina Thompson, enterprise applications director in NW Natural's Information Technology & Services department (IT&S), couldn't help her family members who were hiding from Russian missile strikes in the basement of their building in Ukraine. But she wanted to do something to help other Ukrainians, so she reached out to her fellow NW Natural employees. They came through, using the employee giving website to donate more than \$5,000 and maximize the company match. When Thompson's family finally made it across the Polish border, IT&S solutions architect Jerzy Bilchuk and his family in Poland helped them find housing. "People at NW Natural have been wonderful," Thompson said. "There is still a lot of good in the world, and my family experienced that."

Programs of Focus

Through Programs of Focus, NW Natural supports local organizations making a difference for children and families in our communities. Grant recipients are chosen through a competitive review process that actively engages a diverse group of employees from across the company. The program is NW Natural's highest level of philanthropic support.

"As members of the communities we serve, our employees are best suited to direct our philanthropic giving and help respond to unique community needs."

— Mary Moerlins, NW Natural Director of Environmental Policy and Corporate Responsibility

Over the three years ending in 2022, Programs of Focus gave a total of about \$500,000 to [five local organizations](#) that support children and families at risk. In 2022, the company announced its [Programs of Focus for 2023-2025](#). Four local organizations will receive \$420,000 in unrestricted funding over the next three years, along with in-kind resources and volunteer support from employees.

2023-2025 Programs of Focus:

Adelante Mujeres

Adelante Mujeres provides holistic education and empowerment opportunities to marginalized Latina women and families to promote their full participation and active leadership in the community.

Asian Health & Service Center

Asian Health & Service Center (AHSC) works to bridge gaps between Asian and American cultures, reduce health inequity and improve health care quality for all Asians. Funding from NW Natural will enable AHSC to assist Asian immigrant students and their parents in Portland Public Schools.

Growing Gardens

Growing Gardens uses the experience of growing food in schools, backyards and correctional facilities to cultivate healthy, equitable communities. The organization builds gardens with the community to create equal access to nourishing food and help people become stewards of their own neighborhoods.

Store to Door

Store to Door supports independent living for Portland-area homebound seniors and adults living with disabilities. Through their volunteer-based grocery delivery program, the nonprofit provides social and community connection, food access and food security.

Conservation Champion Award

In 2022 NW Natural launched a new [Conservation Champion Award](#), which provides more than \$100,000 over three years to help environmental nonprofits grow capacity, develop innovative programs or reach new audiences. The award includes an annual cash grant, in-kind resources and multi-level organizational engagement. Awardees are chosen from among nonprofits that have established relationships with NW Natural. The first recipient for 2023-2025 is Oregon Bee Atlas, a volunteer-powered organization based at Oregon State University. The group has compiled a comprehensive publicly accessible inventory of the state's 700+ species of wild bees, and volunteers also meticulously document what flowers each bee visits. The award from NW Natural will be used to turn the data into a tool that will help people match the plants in their region to the bees that live there.





Community Events

Hospitality engagement is part of NW Natural's long history of community support, and every year we contribute resources for events organized by nonprofit, community and civic organizations. We make it a priority to maintain these longstanding partnerships. In 2022 we ramped up our engagement activities as our partner organizations resumed in-person events after a long period of cancellations due to the pandemic.

Our community events team served 8,300 meals and provided 174 loaner tents for events held by groups such as Pride Northwest, Portland Veterans Stand Down and CASA. NW Natural's big blue tents and canopies have long been a familiar sight at local gatherings, and they popped up again across our service territory in summer 2022 as we helped organizations welcome people back. We also resumed our emergency preparedness events, in partnership with local fire departments. We provided free lunches at several of these events, feeding up to 900 people in a few hours.

Part of our mission is to provide in-kind resources for organizations that receive support through our charitable donation programs like Programs of Focus. As these organizations restarted their pre-pandemic activities, we ramped up delivery of resources such as food service, event support and use of NW Natural conference space. For example, A Village for One, one of our 2020-2022 Programs of Focus, held its annual fundraiser at our downtown Portland headquarters, and we contributed the space along with a full buffet dinner for 120 guests. Events like these are core to how we show up for our communities.

Political Contributions

NW Natural makes campaign contributions to state and local candidates and political committees and caucuses, as allowed by law. Our [Code of Ethics](#) sets forth our expectations regarding the use of Company funds for political purposes. We also maintain memberships in various business and trade associations that advocate on public policy. In 2022 we made campaign contributions and had lobbying expenditures totaling approximately \$1.5 million.⁵¹



For more information see also:

[Supporting our Community](#)

[Bill Assistance Programs](#)

⁵¹ Calculated using Internal Revenue Service guidance



NW NATURAL

People & Culture

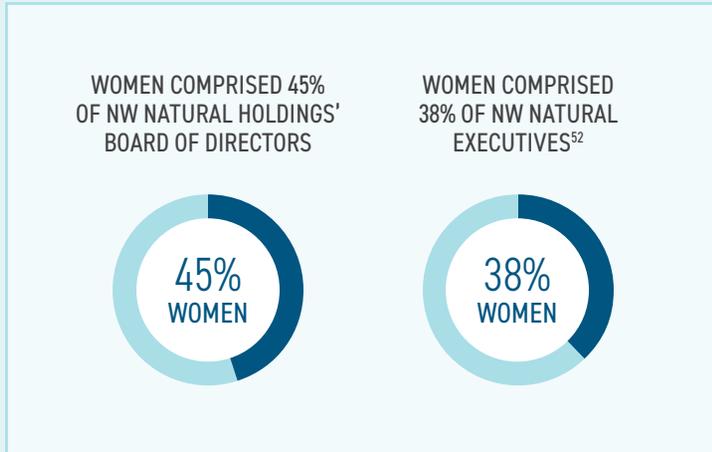
We owe our success to the dedication of our employees. We're committed to supporting, engaging and empowering them in a work environment where they can thrive and grow. NW Natural has a longstanding commitment to creating a diverse, inclusive culture that reflects and supports the communities we serve. We believe that excellence and innovation requires a focus on diversity, equity, and inclusion (DEI) of all our employees.

People and Culture Highlights

82% of NW Natural employees describe themselves as having a sense of belonging at work
(2022 employee satisfaction survey)


100%

100% of employees who work more than 20 hours are eligible for all benefits including paid time off; employees who work more than 40 hours are eligible for additional benefits including full medical and dental coverage.



50/50 WOMEN ON BOARDS

NW Natural Holdings has the highest gender diversity rating ("GB" for gender balanced) from 50/50 Women on Boards



Launched a redesigned mentoring program that includes diversity initiatives and aligns with NW Natural's commitment to equity and belonging



Added the Neurodiversity Network, our seventh Employee Resource Group (ERG)

NW Natural Holdings is one of 7% of publicly traded companies in the U.S. with a woman board chair⁵³



Launched the Community & Equity Advisory Committee to address energy inequity



Martin Luther King Jr. Day and Veterans Day celebrated as new paid company holidays



Expanded the Diversity, Equity, and Inclusion portion of orientation program for new hires, including content that introduces the concept of unconscious bias on day one



Launched a supplier diversity page on our website to highlight opportunities for diverse businesses to work with us and help them navigate the process of becoming a certified culturally or racially diverse business.

⁵² As of June 2023

⁵³ According to the Women Business Collaborative April 2022 report



"I am proud of our employees who embody the ethics of NW Natural. The sense of belonging and collaboration throughout the company is evident."
— David Anderson, NW Natural CEO

Our 2022 workforce

10

Average years of employment

45

Average age of employees

4.9%

Retirement rate

6%

Voluntary separation rate (not including retirements)

Employee benefits

NW Natural strives to offer competitive total compensation packages designed to attract and retain employees and meet the needs of our workforce. We continuously look for ways to enhance employees' physical, psychological and financial well-being, and this is reflected in the programs we offer to meet the needs of employees and help them care for their families. These benefits are outlined below.⁵⁴

Health coverage for all full-time staff. We provide multiple insurance carrier and health plan options for employees to choose from. All plans include outpatient and inpatient medical care, vision and dental insurance, and coverage for dependents.

Flexible work options. We offer a hybrid work model based on meeting individual employees' needs and working styles. According to the Society for Human Resource Management, flexible work options are the [most sought-after work benefit](#) today.

Generous vacation policy. NW Natural non-union employees start with 160 hours of vacation at beginning of employment, while the average for other utilities in the Northwest is 66 hours for new hires.⁵⁵ Nationally, the average number of vacation leave hours reaches 160 only after 20 years of employment.⁵⁶ Non-union NW Natural employees receive 248 hours of paid vacation (about six work weeks) after 15 years of service and union employees receive 208 hours of paid vacation after 13 years of service.

Paid holidays and leave. In addition to vacation time, employees have 10 paid holidays—including Martin Luther King Jr. Day and Veterans Day—plus three floating holidays. We also provide paid parental and bereavement leaves.

Paid sick time and disability insurance. Non-union employees get 80 hours of paid sick time annually, more than the national average reported by the U.S. Bureau of Labor Statistics. The company pays for short- and long-term disability insurance that provide some wage replacement when an employee is out for a qualifying health condition.



Career development. We invest in employees' career growth through tuition assistance, professional training programs and a robust mentoring program developed with an emphasis on cultural relevance for underrepresented groups. ERGs and other internal organizations help employees form connections and visualize what opportunities are available. All employees have access to LinkedIn Learning self-guided professional development modules.

Financial wellness. We provide 401(k) with employer match, automatic employer contribution to 401(k) for non-pension employees, stock purchase plan, pension for employees hired before 2007 (non-union) or 2010 (union).

Onsite offerings. We offer free fitness centers at our downtown Portland headquarters and most resource centers. The headquarters building features indoor bike parking, ergonomic workstations, lactation and quiet rooms and access to nature on our rooftop deck. Employees who work downtown can get a company-paid public transit pass.

⁵⁴ Our package options vary depending on date of hire and whether the employee is full-time, part-time or a union member. Employees who work more than 20 hours are also eligible for certain benefits

⁵⁵ 2022 Milliman NW Benefits Survey

⁵⁶ [Average PTO In USA & Other PTO Statistics \(2023\) – Forbes Advisor](#)

Healthcare & Insurance	Wellness	Financial	Work-Life Balance	Culture & Community	Employee Recognition & Discounts
Medical	Health screenings, Flu and COVID-19 shots	401(k) with employer match	Paid Time Off (PTO)	Seven Employee Resource Groups	Formal employee-recognition program
Dental	Free fitness centers (company headquarters & certain resource centers)	Automatic employer contribution to 401(k) for employees not in pension plan (regardless of employee contribution)		Paid holidays (10) plus three floating holidays	Volunteer opportunities, recognition and financial support for volunteer work
Vision			20% off natural gas service		
Flexible Spending Accounts	Activity rewards program	Financial education workshops for all employees	Flexible and hybrid work arrangements, based on employees' needs and working styles	Sustainability and Equity Engagement Committee	Free public transit pass (company headquarters), bike room, and carpooling support programs
	Tobacco cessation	Employee stock purchase plan			
Health Savings Account	Digital Wellness Library with resources on mental health, nutrition, seasonal health considerations	Pension for employees hired before January 1, 2007 for nonunion and January 1, 2010 for union employees	Employee assistance program	Diversity, Equity & Inclusion Committee	Discounts on natural gas appliances and equipment at the NW Natural Appliance Center
Life Insurance	Work Ready digital wellness and injury-prevention program, available to employees and families	NW Natural Scholarship program for children of employees – awards four scholarships toward full-time study at an accredited institution		Education assistance	
Short-Term and Long-Term Disability			PTO Buy-back Program (union employees)	Paid parental leave	Casual attire dress code in the office
	Transgender-inclusive benefits	Wellness Advisory Committee	Tuition reimbursement program for employees seeking job-related degrees at an accredited institution	Paid bereavement leave	Learning opportunities, including lunch & learns
Predictable scheduling for hourly employees				Community and Equity Advisory Group	

Pay equity

We strive to compensate all our employees equitably, and we have established multiple initiatives to help us achieve pay equity across our workforce.

- We do a comprehensive pay analysis for each new hire.
- To help identify opportunities for improving equity, an external consultant annually reviews all our regular employees' pay data, including protected characteristics such as gender and race.
- We periodically review pay to provide adjustments when needed during an employee's tenure. These reviews include: internal and external equity reviews, promotions, reclassifications and reorganizations.

Employee satisfaction

Every year we conduct an engagement survey to ask our employees how satisfied they are with their individual jobs, supervisors, work groups and the company overall. This feedback gives company leaders valuable guidance on ways to make NW Natural a more effective company and a better place to work. Every officer reviews the survey results, and frontline managers are encouraged to initiate meaningful dialogue with employees about the responses their teams provided. NW Natural CEO David Anderson and our officers regularly visit resource centers to answer questions and get input from field employees.

Results of our 2022 survey indicated that employees were highly engaged in their work in the face of a challenging year. Nearly 84% of employees described themselves as engaged in their work in 2022, compared with just 32% of American workers. About 77% of our workforce completed the survey—in contrast to the average response rate of 25-60% in U.S. companies. NW Natural donates up to \$1,500 to the Oregon Food Bank every year based on survey participation and in 2022 contributed the maximum amount.

2022 EMPLOYEE SURVEY RESULTS

77% Employees participated

86% Proud to work for NW Natural

84% Engaged, committed, and enthusiastic about their work at NW Natural

82% Feel like they belong at NW Natural

EMPLOYEES ALSO AGREED OR STRONGLY AGREED WITH THE FOLLOWING:

- My work area operates with integrity and ethical conduct (96%)
- We demonstrate safe work practices in our work area (95%)
- We engage with customers and the community in a way that respects and values diversity and inclusion (94%)
- I understand the importance of my job to the success of NW Natural (93%)
- We provide excellent service to our external customers (91%)

While employee engagement slumped nationwide in 2022, NW Natural's engagement survey showed favorable responses⁵⁷ in every category, and more than half of all responses were above 80%. We did see modest declines in some areas, as employees contended with external and internal challenges including rapid inflation, rising gas prices, and customers' questions about rate increases. However, thanks to our dedicated employees, we successfully delivered essential utility services, with a focus on safety, reliability and customer service.

⁵⁷ Responses with a score of seven and above are considered favorable. Gallup's Exceptional Workplace Award winners averaged 70% employee engagement

Employees gave their immediate supervisors high marks for providing regular feedback (86%), sharing goals and priorities of the company (87%), following through (90%), allocating people and resources wisely (87%) and being open to feedback (90%).

A work model that works for employees

As we planned for the transition to a “new normal” after pandemic restrictions began to ease, we asked employees to give us their thoughts about what our workplace should look like going forward—and we listened. Based on their feedback, our officer team implemented a flexible hybrid work model that allows managers and supervisors to decide what’s best for the people they lead, as long as work arrangements meet the company’s goals and continue to support our high level of customer service.

“NW Natural is a great place to work, and the addition of flexible work schedules and hybrid capabilities is helping retain good employees and work life balance.”

— 2022 Employee Engagement Survey respondent

In 2022, we continued supporting all our employees with psychological services, resiliency support, and frequent surveys. During catastrophic events, employees have access to a long-standing fund that assists with needs. While the majority of our employees work in the field and maintained their work schedules and locations throughout the pandemic, in 2022 most NW Natural office employees who had been working at home for three years began returning the company’s downtown Portland headquarters at least part of the time. We conducted a survey at the end of 2022 to track how people were doing with the hybrid work model, and results were overwhelmingly positive, with 97% of employees saying their manager trusts them to manage their time and 93% saying their team is connected and productive while working a hybrid schedule.

Productive partnership with our union employees

More than half of NW Natural employees are represented by the Office and Professional Employees International Union Local 11. The company has a history of maintaining good relations with the union through communication and collaboration. Working together, union and NW Natural leaders reached a mutually beneficial agreement in 2019 that is in effect through May 31, 2024. During calendar year 2022, NW Natural did not experience any work stoppages (strikes or lockouts) and had zero idle days for the year.

84% of NW Natural employees described themselves as engaged in 2022, compared with just 32% of employees nationwide.





New mentoring program aims to empower a diverse workforce, one relationship at a time

In keeping with our core value of caring, NW Natural first created a mentoring program in 2006. In 2022 we launched Mentoring 2.0, designed from the ground up in partnership with our Diversity, Equity & Inclusion Council and ERG leaders. The new program offers robust new growth and development opportunities and aligns with NW Natural's commitment to fostering an inclusive culture and ensuring racial, cultural, ethnic, and gender equity in all aspects of our work.

With a focus on reaching women and historically marginalized groups, Mentoring 2.0 helps mentees build professional relationships, identify potential career paths at NW Natural and develop strategies for advancement. Mentors receive nine training sessions to help them strengthen coaching and communication skills, listen effectively and engage productively with people who have different experiences and viewpoints. The first 25 mentor/mentee pairings were identified in 2022 and met in early 2023. The mentor group included four officers, and the mentees were 28% women, 40% of whom were culturally or racially diverse. Participation in the new program is on paid company time.

Growth and development

To help employees reach their full potential, NW Natural provides growth and development opportunities through programs designed to build skills and relationships. In 2022, the company offered many learning and development options including:

- **Mentoring program** – In 2022 we launched an all-new mentoring program to provide a fresh path for employees committed to personal and professional growth to connect with mentors who have experiences to share. The program was designed from the ground up to offer robust opportunities for development and to increase cultural relevance for racially and culturally diverse employees.
 - **Scholarships and tuition** – Qualified employees are eligible for tuition support of up to \$5,250 per year for undergraduate and graduate degree programs. Employees have received more than \$700,000 in assistance for higher education over the past 10 years. NW Natural also awards four annual scholarships to children of employees seeking a degree at an accredited institution.
 - **Gas class** – Our internal class gives employees a chance to learn how the company operates, better understand how they contribute to achieving our key goals and see opportunities for career growth. For years the class was offered in-person only, which meant the class size was limited. In 2022 NW Natural's Organizational Effectiveness team redesigned the course as an online offering with a flexible, virtual format that makes it available to all employees.
 - **Leadership and employee development** – Many employees attend internal and continuing education courses relevant to their areas of expertise, as well as ongoing management and leadership training through a variety of programs. In 2023 we intend to expand our internal leadership learning program to reach all managers across the company.
- Our list of training and development programs include: University of Idaho Energy Executive Course, Portland Business Alliance (now Portland Metropolitan Chamber) Leadership Portland program, AGA Executive Leadership Development Program, Willamette Utility Management Certificate Program, WEI Business Acumen for Emerging Leaders, Willamette Leadership for Attorneys in Business, Executive Development Institute (EDI) programs, Executive Forum Advanced Leadership program, AGA Next Level Leadership Women's Program and Utility Finance for Non-Finance Professionals.
- **Access to comprehensive learning programs** – Employees have full access to LinkedIn Learning's massive collection of online skill-building courses taught by industry experts.



Workplace culture and community engagement opportunities

We're continuously developing programs and ways to engage our employees, help them connect to their colleagues, and pursue their interests. In 2022 employees had the opportunity to participate in a range of activities to connect with their peers.

WELLNESS ADVISORY COMMITTEE – The committee helps guide the company's wellness program, offering advice, new ideas and feedback from their peers to further the health and well-being of all NW Natural employees.

SUSTAINABILITY & EQUITY ENGAGEMENT COMMITTEE (SEEC) – The employee-led SEEC builds a broad coalition around energy, equity and environment practices at NW Natural. The committee promotes sustainable practices within the company, and serves as a conduit to management as well as community partners working to address climate change and environmental equity. The SEEC presented a series of lunch and learn events to educate employees about Earth Month.

COMMUNITY & EQUITY ADVISORY GROUP (CEAG) – Established in 2022, CEAG focuses on energy equity, specifically aiming to expand energy access and remove barriers for underserved customers. Led by employees, this group seeks out and engages with diverse organizations and underrepresented voices within our community to bring a racial equity and environmental justice lens to our energy and operational planning.

ECOCHALLENGE – NW Natural employees embraced the Ecochallenge in 2022, integrating sustainable actions into their daily lives while earning points and winning prizes. The SEEC, in partnership with the Wellness Committee and the DEI Council, connected employees with a 21-day event run by Ecochallenge.org, a social change platform that encourages a more sustainable way of living.

DOWNTOWN CLEANUP – NW Natural employees volunteered in the second annual cleanup event sponsored by SOLVE to help remove 4,715 pounds of trash and revitalize downtown.

BIKE CHALLENGE – The SEEC encouraged employees to reduce their carbon footprint, connect with others and get moving in the 2022 Bike Challenge. Participants logged their miles via an app, and every ride counted, whether for fun, fitness or a commute to work.

ROSE CITY 5K – NW Natural was the start line sponsor of the annual Rose City 5K run, which returned in 2022 after a COVID-19 hiatus. The company's sponsorship allowed employees to register for free and attend a post-race celebration in Portland's Waterfront Park.

COMPANY PICNIC – After a two-year break during the pandemic, the NW Natural company picnic returned to Portland's Oaks Amusement Park in July 2022. Employees, retirees and their families attended the event, which featured rides, craft activities and food prepared and served by the NW Natural catering team.

Diversity, Equity & Inclusion Strategic Focus

At NW Natural, we know all of us benefit when we amplify underrepresented voices, celebrate our differences and create an environment where everyone can contribute, thrive and prosper. We prioritize cultural, racial, and gender equity in all aspects of our work, from our hiring and daily operations, to the way we interact with our customers and communities, to the biggest decisions we make as a business.

To accelerate our work in this area, we hired an outside consultant to review our progress on diversity. We convened focus groups and created an assessment and a set of recommendations for our executives. Incorporating this feedback, in 2019 we introduced a comprehensive DEI strategy overseen by the Public Affairs and Environmental Policy Committee of our board of directors. We view events of recent years and the growing movement for racial equity as opportunities to accelerate our work and serve as an active force for change.

“Diversity is critical to NW Natural’s future success and an important part of our culture and values. We know that a broad base of perspectives, experiences, and ideas will be our strength in a changing world – and a critical component to achieving the company’s strategic plan.”

— David Anderson, NW Natural CEO



People

We actively work to build a diverse workforce that reflects the communities we serve. We have a diversity strategy for all levels in our organization, including senior management. Our VP, chief HR and diversity officer leads these efforts and reports directly to the CEO because we believe a diverse, equitable and inclusive workplace is vital to our long-term success.

LEADERSHIP. Diversity starts at the top, and we are proud to have racially or culturally diverse individuals and women in leadership positions. In 2022 our board received the highest gender diversity rating (“GB” for gender balanced) from 50/50 Women on Boards; only three companies in Oregon and 11% of Russell 3000 companies were rated as gender-balanced. According to the investment research firm Morningstar, better stock price performance and value-creation strategies are associated with greater women representation on boards and management teams.⁵⁸

Women hold 45% of the seats on NW Natural Holdings’ board of directors, and our board chair is a woman. Nationally, women hold 28% of seats on the boards of publicly traded companies,⁵⁹ and only 7% of publicly traded companies have a woman board chair.⁶⁰

	NW Natural Holdings	Russell 3000 Companies
Percentage of board members that identify as racially or culturally diverse	27%	17% ⁶¹
Percentage of board members that identify as women	45%	28% ⁶²
Percentage of women that hold C-suite positions	38%	32% ⁶³

NW Natural Gender 2022	NW Natural Holdings’ Board	Executive Management	Mid & Other Management	All Employees
Women	45%	38%	30%	27%
Men	55%	62%	70%	72%
Nonbinary	0%	0%	0%	<1%
Decline to Respond	0%	0%	0%	<1%

⁵⁸ Morningstar Sustainability Matters, March 2023
⁵⁹ As calculated by 50/50 Women on Boards, through September 2022
⁶⁰ Fortune – More women are on boards, but few are chairs or lead directors, February 2023
⁶¹ 5050WOB-Q4-22-Infographic-Final
⁶² 5050WOB-Q4-22-Infographic-Final
⁶³ Women in business 2022 | Grant Thornton insights



WORKFORCE DEMOGRAPHICS. NW Natural highly values every employee from every generation, background, and way of life. Our diverse skills, deep company knowledge, unique perspectives, and broad experience help us meet customers' needs. In 2022 nearly 21% of our employees self-identified as racially or culturally diverse—an increase of more than 23% since 2012. NW Natural maintains affirmative action plans and these programs have been in compliance with every federal audit since 2017.

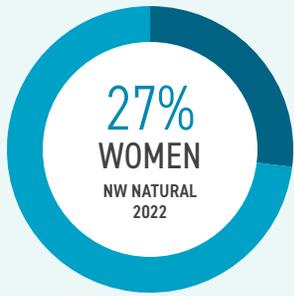
Actively building a workforce that reflects our communities

Race/Ethnicity	NW Natural 2022	Oregon 2020 (Census Data)
American Indian or Alaska Native	3%	1%
Asian	6%	5%
Black or African American	4%	2%
Decline to Respond	1%	N/A
Hispanic or Latino	5%	13%
Native Hawaiian or Other Pacific Islander	1%	0%
Two or More Races	2%	4%
Undeclared/unknown	<1%	N/A
White	78%	75%

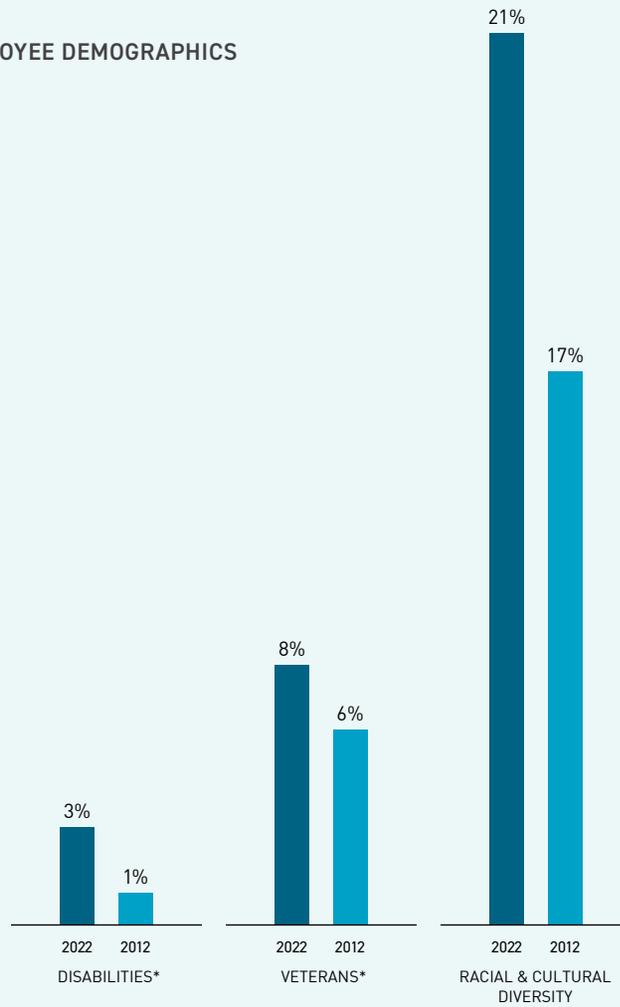
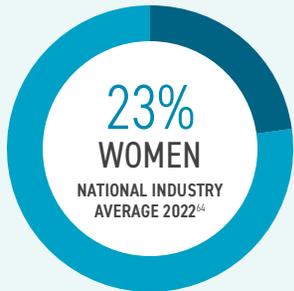


Not to be used for investment purposes—see NW Natural and NW Natural Holdings most recent Form 10-Ks as updated by the most recent quarterly and periodic reports for information relevant to investment decisions.

EMPLOYEE DEMOGRAPHICS

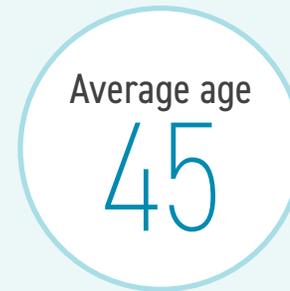
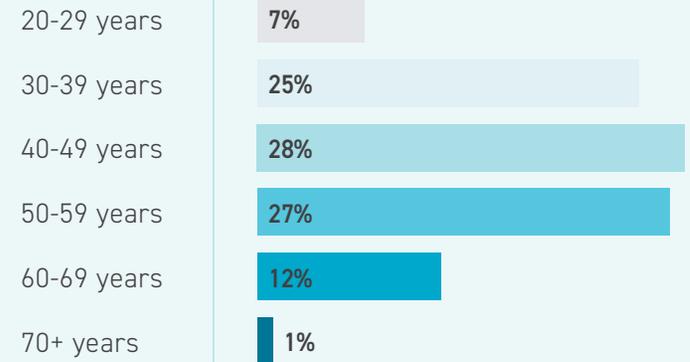


VS.



A MULTIGENERATIONAL WORKFORCE

AGE CATEGORIES



*Disabilities and Veterans' data is collected via voluntary employee disclosure beginning in 2015 and may be underreported.

⁶⁴ U.S. Bureau of Labor Statistics, 2022 Labor Force Statistics from the Current Population Survey. [Employed persons by detailed industry, sex, race, and Hispanic or Latino ethnicity](https://www.bls.gov) : U.S. Bureau of Labor Statistics (bls.gov)

Workplace culture and community

NW Natural offers a multitude of ways for employees to pursue their interests and connect with their colleagues. In 2022, employees participated in a range of activities that strengthened and celebrated our work community.

DIVERSITY, EQUITY & INCLUSION COUNCIL – Founded 23 years ago, the DEI Council is a group of employees from across the company who work to make NW Natural a more diverse, inclusive and welcoming workplace for everyone. The council supports this vision through education, outreach, advocacy and action. In addition to being a force for positive change, employees who join the council have opportunities to learn new skills and grow in their careers.

EMPLOYEE RESOURCE GROUPS (ERGS) – The DEI Council developed NW Natural's ERG program in 2020 to provide employees—especially historically underrepresented groups—with a space to foster connections and create a sense of community at work. In addition to helping their NW Natural co-workers understand and value differences, ERGs engage in community outreach, partnerships, and support recruiting, development and advancement of diverse employees within the company. Job seekers tell our recruiters that the ERGs have been a positive factor in choosing to work for the company.

CURRENT ERGs



In 2022 NW Natural:

- Launched our new Neurodiversity Network ERG, bringing our total number to seven
- Hosted a PDX ERG event in Portland, bringing together 60 participants from 11 different companies to discuss DEI training ideas and best practices
- Conducted leadership training for ERG members to build their strengths as ERG leaders and prepare them for future leadership roles within the company





ERG-SPONSORED ACTIVITIES IN 2022 INCLUDED:

Celebrating Black History Month – Sponsored by NW Natural’s African American ERG, this celebration featured a month of profiles, videos and other content to shine a light on the many ways Black Americans have shaped U.S. history, politics, culture and more.

Women’s History Month – NW Natural’s Women’s Network held a month-long celebration of the economic, cultural and political achievements of women, with events to engage employees in discussions focused on empowering them in their lives and careers and contributing to a workplace where everyone feels respected and supported.

Honoring Asian American heritage – To celebrate Asian Pacific American Heritage Month, NW Natural’s Asian American Network ERG curated a lineup of virtual events, documentaries and articles that showcased the struggles and achievements of Asian Americans and gave employees an opportunity to explore and experience the diverse aspects of Asian and Asian American culture.

Pride Parade – In July 2022, NW Natural employees took to the streets in the Portland Pride Festival and Parade and celebrated at an after-party hosted by the Rainbow Alliance ERG.

Paying tribute to Veterans – On Nov. 11, 2022, NW Natural employees for the first time celebrated Veterans Day as a paid holiday to acknowledge those who have served in the armed forces.

Honoring Juneteenth – 2022 marked the first year Oregon has observed Juneteenth as a state holiday. Juneteenth commemorates the end of slavery in Texas, the last state in the U.S. to comply with the Thirteenth Amendment. NW Natural’s DEI Council and the African American ERG invited their fellow employees to join in recognizing Juneteenth and provided resources with information about celebrations throughout Oregon.

Hispanic Heritage Month celebration – Honoring the contributions and achievements of Hispanic and Latin Americans, the four-week event at NW Natural showcased the rich diversity of these cultures. Somos Unidos, NW Natural’s Hispanic and Latin American Employee Resource Group, kicked off the month with a special rooftop fiesta at the company’s downtown Portland headquarters, where attendees lunched on fare from local Hispanic and Latin American businesses and homemade dishes provided by Somos Unidos members.

Indigenous People’s Day – “Honoring Indigenous People” was the focus of the October 2022 “Be the Change Challenge” through the Virgin Pulse digital health and wellbeing program available to all NW Natural employees. Participants could watch a video, read articles, listen to a podcast, and/or support a nonprofit related to Indigenous People.

Spotlight on gender awareness – During Non-Binary Awareness Week, NW Natural’s Rainbow Alliance ERG invited employees to learn about and support individuals whose identity falls outside traditional gender norms. The alliance sponsored a free workshop, Understanding Gender 101.

March for Babies – NW Natural’s African American ERG and Women’s Network ERG sponsored the company’s team in the March of Dimes annual March for Babies walk, which raises funds to create positive change for moms and babies everywhere, especially those most at risk.





Neurodiversity Employee Resource Group celebrates diverse perspectives

In 2022 employees spearheaded the creation of a Neurodiversity ERG to encourage the view that human brains function in diverse ways that should be recognized and respected as differences rather than deficits. The group's vision is to raise awareness, build acceptance and increase openly neurodivergent representation in company leadership and programs. A top priority is to provide a welcoming atmosphere for neurodivergent people from communities that have been marginalized. The ERG also supports employees who have neurodivergent family members or dependents, offering resources and connections to help caretakers create a happier life outside work and focus more effectively when they're on the job.

"Neurodivergent employees make unique contributions in the workplace. They may have skills like creativity, perseverance, pattern-recognition, keen memory and acute observations. Having someone who's neurodivergent on your team can help keep the team robust and healthy."

— Vance Voyles, Engineering Technical Coordinator and Neurodiversity Network ERG co-founder

Recruiting more diversity into NW Natural – 2022 highlights

Increasing the diversity of our workforce through recruitment is a top priority at NW Natural. A significant focus is to understand and increase awareness of systems and structures that could limit representation and equity for prospective employees. We have a comprehensive approach that includes implementing new recruitment and hiring strategies, increasing our pool of diverse candidates through our community partnerships and providing anti-bias training for HR and hiring managers. We achieved the following results in 2022:

- Increased the diversity of NW Natural's construction team by 11% from 2018 to 2022; now 29% of employees on the team are from historically underrepresented groups.
- Offered full-time positions at NW Natural to 83% of participants in our Construction Internship Program, which provides paid on-the-job training for members of underserved populations.
- Launched a new, union-endorsed internship program for Construction Field Services
- Leveraged our partnerships with local agencies to raise awareness about our commitment to building an inclusive, welcoming workplace for everyone.
- Partnered with Urban League Construction Careers Training Institute to inform job candidates about opportunities in construction and Customer Field Services at NW Natural.
- Strengthened relationships with Urban League and other community partners such as National Association of Minority Contractors, Oregon Tradeswomen, and Constructing Hope.

Diversity in the field

To serve our communities and promote diversity within our field workforce, we work to create employment opportunities for underserved populations. We launched an innovative Construction Internship Program in 2018 to seek out high-quality prospective employees who might not have the background to qualify for—or even find out about—a well-paying construction job. Every year the program provides up to 12 interns with nine months of paid on-the-job training and practical work experience that can lead to full-time employment at NW Natural. We recruit applicants through local public schools, careers fairs, online channels, social media and community organizations. All our 2022 interns were diverse employees, and 83% were offered full-time positions at NW Natural at the end of the program.

In 2022 we expanded our outreach by building on our strong relationship with Urban League of Portland. NW Natural became a regular presenter at the Urban League's Construction Careers Training Institute, and one of the institute's graduates subsequently joined the company as a construction intern and has been hired as a full-time employee. Based on the success of the program, we created a Construction Field Services internship program in 2022.

Employees engaged in recruiting diverse candidates

NW Natural employees attended or hosted many events in 2022 aimed at recruiting women and racially and culturally diverse employees. These included:

- “Say Hey” virtual networking events sponsored by Partners in Diversity to welcome culturally or racially diverse professionals who are new to Oregon and Southwest Washington. NW Natural is a founding member of Partners in Diversity, and our VP, chief human resources and diversity officer serves on the organization's board.
- The Urban League of Portland Career Connections Job Fair, which focuses on diverse job seekers.
- Urban League's Construction Careers Training Institute, where candidates gain the skills necessary to enter the construction field.
- Constructing Hope, which supports women and culturally and racially diverse people in various industries.
- Centro Cultural held a networking gala that was sponsored and attended by NW Natural employees.
- Participated in the Military Western Regional Virtual Career Fair hosted by Military X. The career fair is for active and retired military personnel looking for jobs in the civilian world.
- Happy hours sponsored by Portland Women in Tech, which helps empower women, nonbinary and underrepresented people to join and remain in the technology field.
- Used the Handshake platform to share NW Natural job listings with colleges and universities, including culturally diverse institutions of higher education.



Constructing a career

When she was in high school Amanda Sears Wyman knew she wasn't interested in the college degree her counselors and teachers seemed to be promoting. "My family can't afford college, and it was just not something I saw myself doing," she said. "I never wanted to be in an office. I wanted to be outside doing something physical."

After graduating she was accepted for a job as a traffic-control flagger with NW Natural's main flagging contractor. Working alongside NW Natural construction crews, she watched the skilled work they were doing and knew she wanted to pursue a career in construction. "I asked a lot of questions about what it would take for me to work at the gas company," she said. "I had no construction background—I'd never even held a shovel." She applied for the Construction Internship Program and was hired into the program in 2021 at age 22. The learning curve was steep, the work often physically grueling and she excelled. "What helped me through was my work ethic and my attitude—always being willing to learn and to help wherever needed," she said. After completing just six months of the nine-month internship, she was offered full-time employment at NW Natural. She now works as a pipefitter and was recently promoted. Along the way she has had supportive mentors and a crew that treated her as a valued colleague in the field. "We're all one team here," she said. "Sharing the work is a big thing at this company, and we do a really good job of it."

In 2023 Amanda spoke with high school students at the Oregon Tradeswomen Annual Career Fair about her career at NW Natural. "I wish schools would push the trades the way they push college," she said. "Most people my age aren't doing what I do or making as much money as I do. I'm saving for a house, and my friends graduating college right now are in debt instead." She sees NW Natural as a place where she can continue to grow professionally. "Maybe one day I'll want to go into the training department," she said. "But not anytime soon. I show up every day with a smile on my face and I'm always learning new things. My plan is to stick with this."





Partners—Our Suppliers

We actively work to expand the diversity of our supplier network and increase our purchasing from businesses owned by women, veterans, and other traditionally underserved and underrepresented groups. We also encourage our suppliers to use diverse subcontractors while performing work on NW Natural’s behalf. Our CFO and our VP controller and treasurer works with our chief diversity officer to oversee our diversity procurement activities.

2022 DE&I Highlights—Partners

- Implemented an enterprise technology upgrade that gives us tools to better measure and track our work with diverse suppliers
- Began using third-party supplier-diversity data for more accurate and robust vendor analysis
- Introduced new reporting to measure our suppliers’ spend on second-tier subcontractors and determine the impact on our diversity goals
- Launched a [supplier diversity](#) page on our website to highlight opportunities for diverse businesses to work with us and help them navigate the process of becoming a certified culturally or racially diverse business. In 2022, 26% of supplier inquiries submitted through our website were from diverse businesses

WE PURCHASED
\$23.7
 MILLION

in goods and services from verified culturally or racially diverse-, woman- or veteran-owned businesses in 2022

WE PURCHASED
\$202.3
 MILLION

from small businesses in 2022



Through our Sustainable Purchasing Program, we form strategic partnerships that help us build a more diverse supplier base. These relationships support the communities we serve. Our current partners include:

- Northwest Mountain Minority Supplier Development Council
- Oregon Native American Chamber
- National Association of Minority Contractors
- Latino Built – An Association for Latino Contractors in Oregon
- Women’s Business Enterprise Council
- National LGBT Chamber of Commerce
- Oregon Association of Minority Entrepreneurs

Our Corporate Purchasing and Expenditures Policy sets forth certain business requirements, including diversity, that we consider when reviewing purchase orders. When evaluating requests for proposals (RFPs), we consider the prospective supplier’s ability to help NW Natural achieve our business requirements along with our goals for supplier diversity and we request information that includes the prospective supplier’s certification as a culturally or racially diverse-owned, women-owned, underrepresented, or emerging small business, as well as its own diverse-supplier program and opportunities to use diverse subcontractors.



Customers & Community

To serve our increasingly diverse community, we have a customers and community strategy focused on ensuring all customers have equitable access to natural gas programs. We're also focused on fostering DEI in our communities through partnerships, volunteering and financial support. Multiple groups within our organization work to execute these strategies, including our customer service team, our DEI Council, and our Environmental Management and Sustainability team. These groups work closely with our chief diversity officer.

2022 DE&I Highlights – Customers & Community

- Launched a Community and Equity Advisory Group to better incorporate underrepresented voices into our processes and programs. The group provides NW Natural with feedback and recommendations related to low-income and arrearage programs, company philanthropic investments, system planning and renewable resource development.
- Introduced a bill discount program for income-qualifying residential customers, which incorporated their feedback, in keeping with NW Natural's commitment to improving energy equity and easing the energy burden for our low-income customers.
- Produced outreach materials in our service territory's five most commonly spoken languages to inform customers of bill assistance programs.
- Conducted our first low-income needs assessment to better understand the low-income customer base in our region.
- Continued to employ an equity lens in the way we engage externally as a funder, community partner and energy provider. In our philanthropic activities, this means we seek out and fund nonprofit partners that demonstrate a shared commitment to DEI.
- Redesigned and reestablished a competitive grant program that increases, expands and accelerates funding for weatherization projects for income-qualified customers.
- Proactively worked with our ERGs to identify and fund new partners in the energy justice, social justice and community-specific space and create programs for corporate philanthropy to match the funds ERGs raise for these initiatives.
- Completed a landmark mural, initiated by the DEI Council, at NW Natural's Portland headquarters. Called "Inheritance" by local artists Alex Chiu and Jeremy Nichols, the massive 52-by-50-foot art piece is 11 stories up and can be seen from many vantage points across Portland.

91% of NW Natural employees feel their work group engages with customers and the community in a way that respects and values diversity and inclusion

Not to be used for investment purposes—see NW Natural and NW Natural Holdings most recent Form 10-Ks as updated by the most recent quarterly and periodic reports for information relevant to investment decisions.





NW Natural-sponsored series features inspiring stories of Black Oregonians

NW Natural was one of five sponsors of a locally produced video series, “Expressions in Black,” that focuses on creative, successful Black Oregonians and their inspiring stories. The show’s creators sought to widen the lens through which the Black community is often viewed. Portland’s Heart & Hustle Productions created the series with a team that produces cutting-edge video content for brands like NIKE, the NBA and Jordan Brand.

“NW Natural is excited to continue supporting the ‘Expressions in Black’ series and amplifying the voices, experiences and contributions of the Black Oregonians featured in this year’s episodes.”

— Melinda Rogers, Vice President and Chief HR and Diversity Officer

Community and Equity Advisory Group

NW Natural launched CEAG in 2022 which focuses on energy equity by directly engaging with diverse voices in the community to help us enhance the company’s feedback channels, processes and programs. From a place of listening and learning, this panel of representatives from community-based organizations across our service territory seeks to elevate historically underrepresented perspectives, bringing a racial equity and environmental justice lenses to the company’s energy and operational planning. Through this deeper community engagement, NW Natural works to uncover and address barriers to energy equity and ease the burden for our most low-income customers.

Human Rights, Equal Opportunity and Prohibition on Discrimination

At NW Natural, we believe human rights are fundamental freedoms and standards of treatment to which all people are entitled. Our [Human Rights Policy](#) was reviewed and approved by our board of directors and articulates our commitment to identifying, preventing and mitigating human rights risks, including: prevention of harassment and discrimination; commitment to diversity; freedom of association; safety and security; land rights and biodiversity; and prohibition of child or forced labor, among other things. We also maintain policies on equal employment opportunity and prohibition of discrimination and harassment, in keeping with our intention to foster a culture of inclusivity and support employees’ right to work in an environment free of discrimination and harassment.



For more information see also:

[Diversity, Equity & Inclusion](#)

[Careers at NW Natural](#)

[Human Rights Policy](#)

Water & Wastewater

Water is essential for life, security and stability, and we take our responsibility seriously to provide and protect this critical resource. The core values and competencies that have made our natural gas utility successful for more than 160 years also guide our growing family of water and wastewater utilities.

Water Highlights



Increased customer base by eight-fold since entering the water utility sector in 2017

\$20 MILLION

Invested nearly \$20 million in critical infrastructure on an accrual basis in 2022, including new wells and backup generation to maintain water and wastewater services during power outages



Completed acquisition of Far West (now Foothills), doubling our customer base and extending our operations into a fifth state



Continued our investment in Avion Water in Central Oregon, strategically expanding our presence in Oregon



Expanded our footprint in Texas with agreements to acquire three more utilities in the state



Continued to formalize safety standards and expand safety training across our water subsidiaries

89%



of NW Natural Water employees responding to 2022 employee satisfaction survey described themselves as engaged, committed, and enthusiastic about their work

Building on a Strong Foundation

NW Natural Water provides our service territories with financial, technical, and regulatory resources to help ensure safe, reliable and affordable delivery of water and wastewater services to our customers every day. As a subsidiary of NW Natural Holdings, NW Natural Water is building on a strong foundation of superior customer service, responsible environmental stewardship and constructive regulatory engagement.

We've grown exponentially since NW Natural Holdings entered the water utility sector in December 2017. Through a deliberate and measured growth strategy, NW Natural Water has expanded its service territory to five states: Oregon, Washington, Idaho, Arizona, and Texas. We have acquired more than 25 water and wastewater utilities, serving around 155,000 people through about 63,000 connections as of December 31, 2022.



Safety & Reliability

Investing in new infrastructure and meeting customer needs safely and efficiently requires significant resources. We regularly invest in infrastructure improvements and safety measures that can be out of reach for small, stand-alone water utilities. In 2022, we invested nearly \$20 million in our water and wastewater infrastructure on an accrual basis with plans to invest \$90 to \$110 million in capital expenditures over the next five years.

- We made broad investments in backup generation to keep electric-driven equipment operating in the event of a power outage. This equipment prevents pressure drops that can compromise water quality and cause service interruptions. Standby generators to protect reliability and safety aren't required for some of our smaller water utilities, but we're investing in them because it helps us provide the superior service our customers deserve.
- We provided infrastructure capital to bring on new wells—one of the most involved and expensive projects in the water business.
- We started construction on a major upgrade of our Sunriver Water wastewater treatment plant to create a state-of-the-art facility that can produce 1.5 million gallons of Class A recycled water each day, the Oregon Department of Environmental Quality's highest standard for recycled water.
- We invested in technology to prevent business disruptions.
 - » We moved several programs to the cloud to reinforce security.
 - » We implemented supervisory control and data acquisition (SCADA) systems at all our subsidiaries, making it possible to proactively detect leaks and pressure drops.

"Since working with NW Natural Water we've been able to pursue capital improvements that would have taken us years to save up for. We simply would not be able to do this without NW Natural Water."

— Ron Payne, Blue Topaz Utilities General Manager

Building a culture of safety

As our water business has grown, we have created a comprehensive safety program to help our NW Natural Water subsidiaries all meet the same high health and safety standards to protect our employees and communities. To build that culture and standard of safety, we've implemented formalized safety practices and training that we are continually integrating throughout the workplace. Building a comprehensive safety program from the ground up is typically a long and challenging process, but we have been able to make swift, steady progress with the support from our experienced safety team. In 2022, the third year of our NW Natural Water safety program:

- We performed a safety risk analysis at each facility and began making item-by-item improvements.
- We began tracking safety metrics and reporting results to increase visibility.
- We introduced a monthly meeting for all safety teams and managers to review safety status and determine what needs to be done.

"It's great to partner with a company that has hands-on experience with safety issues that affect the utility industry."

— Tony Wise, Falls Water Company Operations Manager



Our commitment to safety and reliability

served NW Natural Water customers well in 2022, when we made a large investment in installing generators in all our Texas water systems. During a freeze that lasted for several days, our customers did not lose their water supply when power outages affected several other water systems in the state. We are currently working on a generator project to help ensure the customers who depend on our Southeast Texas water systems will be supplied with water during storms.



Water conservation

In the midst of a multi-year drought, our Falls Water subsidiary has been emphasizing water conservation. To reduce the amount of water being pumped, the company developed a program that limits watering of lawns and landscaping to every other day and encourages customers to start their sprinklers during off-peak hours. These measures, along with heightened customer awareness of the drought, helped Falls Water reduce production by 140 acre feet of water even while adding 281 connections to the system. The company's current rate case seeks approval for a tiered water rate to further reduce consumption.

Environmental Stewardship

Water is a precious resource, and we're committed to using it wisely.

- **We strive to operate and maintain high-quality** water and wastewater systems so our facilities deliver safe and clean water to our customers.
- **We engage in comprehensive planning** to support investments in infrastructure and technology that are resource-efficient, cost-effective over their lifecycle, protective of the environment, and consistent with the goals of our communities.
- **We invest in critical infrastructure** that's essential for meeting water-quality regulations. For example, across our water utilities we've invested in new wells, valves, pressure regulating valves, water mains, and technology like SCADA and GIS systems that help us maintain water quality by detecting and preventing low-pressure events that can lead to contamination.

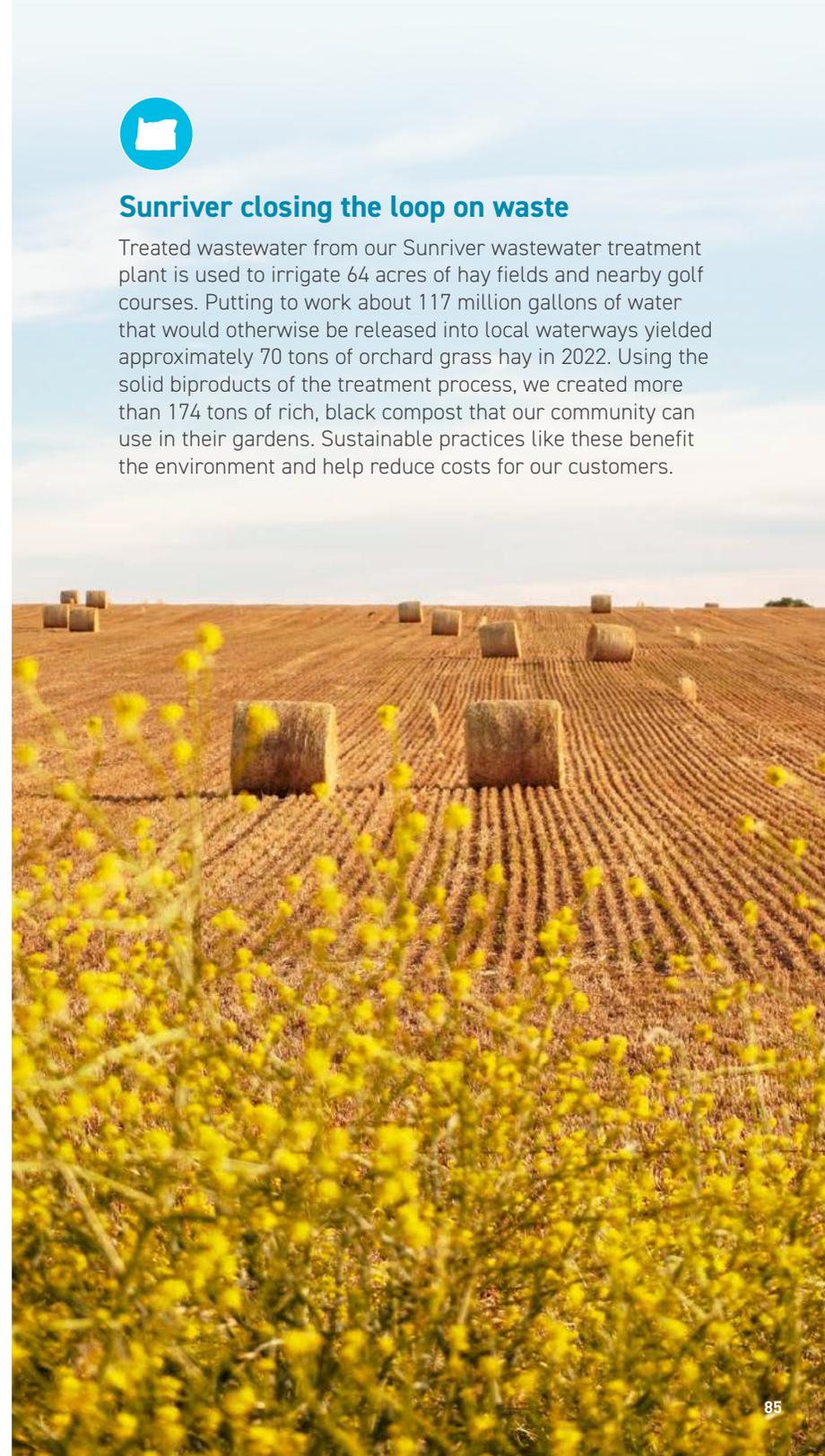
A major upgrade to our wastewater treatment plant in Sunriver has brought the water quality at the plant to the class "A" reclaimed water profile, the Oregon Department of Environmental Quality's highest standard.

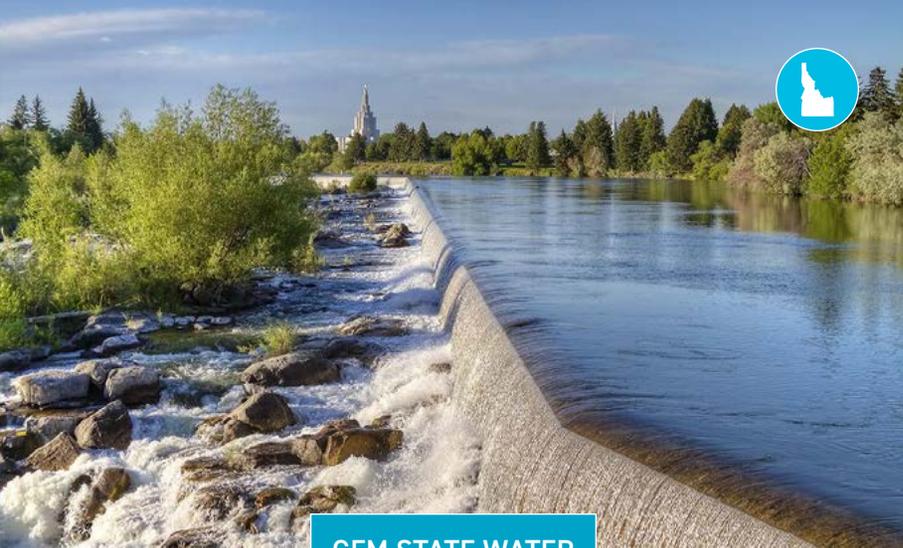
- **At our wastewater treatment plants**, we strive to meet the highest standards for environmental sustainability. We continue to install SCADA systems at lift stations to help prevent wastewater overflow and protect lakes, rivers and streams.
- **We are resolutely focused on reducing water loss, conserving water and preventing waste.**
 - » We have installed technology to help minimize water leakage across our infrastructure. Our subsidiaries now have tools to perform water-loss analysis.
 - » We encourage customers to reduce water use. Our water utilities feature water conservation tips on their websites and encourage customers to use water-saving household fixtures. Sunriver Utilities provides low-flow faucet kits at no cost for homeowners who want to conserve water.
 - » Many of our water utilities have also adopted measures designed to reduce the amount of water used by residential customers who consume the highest percentage of water. In certain cases we work directly with heavy water-users to help them reduce their consumption.
- **We look for opportunities to implement water reuse strategies** in areas of limited supply—a practice we believe is good business as well as our responsibility to the environment. For example, at our Sunriver and Foothills utilities, we reuse treated wastewater for secondary irrigation on several golf courses.



Sunriver closing the loop on waste

Treated wastewater from our Sunriver wastewater treatment plant is used to irrigate 64 acres of hay fields and nearby golf courses. Putting to work about 117 million gallons of water that would otherwise be released into local waterways yielded approximately 70 tons of orchard grass hay in 2022. Using the solid byproducts of the treatment process, we created more than 174 tons of rich, black compost that our community can use in their gardens. Sustainable practices like these benefit the environment and help reduce costs for our customers.





GEM STATE WATER

Continuing a tradition of putting customers first

Gem State Water in Coeur d'Alene, Idaho, prides itself on being a local company, even three years after joining NW Natural Water. Customers appreciate that Gem State Water's employees reside in the same neighborhood as they do, know many customers personally, and go above and beyond to help each customer.

Gem State's employees' caring approach came in handy in 2022 as Gem State Water began a large project to update aging infrastructure, including meters. Due to Idaho's winters, Gem State chose to upgrade to smart meter technology, which can help curb water costs for customers and conserve water. The new meters provides data and immediate alerts if there is a leak or disruption in service, allowing Gem State employees to address issues quickly. Gem State Water is eager to continue working on its comprehensive infrastructure plan to support its unique community with the assistance of NW Natural Water.

"Changes can be hard for people, and our customer service ensures they make contact with everyone that calls. We take the time to personally connect, listen to their concerns, and create a relationship with them."
— Leslie Abrams-Raynor,
General Manager of Gem State Water

Our Communities, Our Customers

Our customers are our community, and we are committed to serving and supporting them.

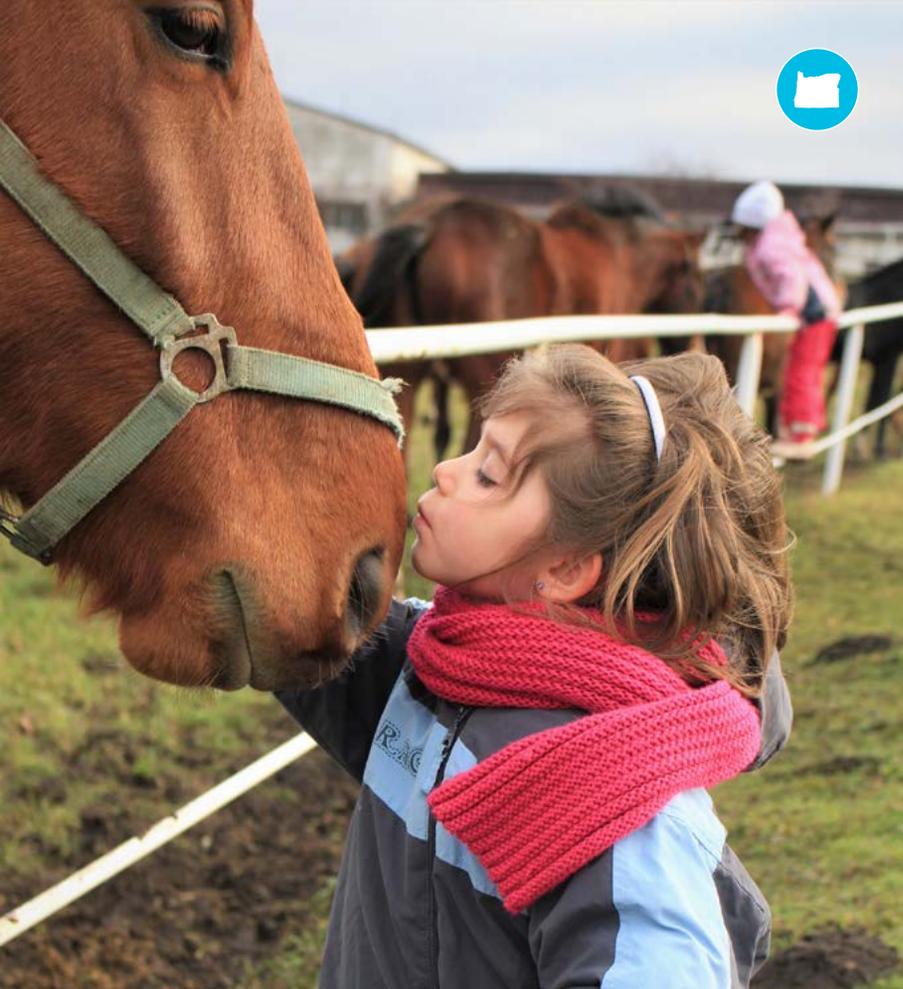
SAFE, RELIABLE SERVICE – In 2022, our water utilities continued to work together to address supply-chain disruptions to avoid material issues, although there were long lead times for certain parts. Generators, which support safety and reliability, were back-ordered for two years, and we developed an alternative strategic plan to provide backup generation during power outages.

CUSTOMER EXPERIENCE – We partner with community-oriented water utilities that are dedicated to serving customers, and we're committed to preserving and building on that legacy. We have enhanced the online experience people have when they do business with our subsidiaries, with updated and standardized websites where customers can pay their bills and get instant access to features and information, including water quality (consumer confidence) reports, rate structure, a "call us" button, and water-emergency resources.

BILL PAYMENT ASSISTANCE – To support people experiencing financial hardship, we offer time payment agreements that allow customers in need to pay a portion of their bill in installments. We created this program during the pandemic and we are keeping it in place to assist low-income members of our communities.

ENGAGEMENT – With deep roots in the communities they serve, our subsidiaries work diligently to meet their customers' needs, understand their stakeholders' concerns, and operate as good neighbors. Our water and wastewater companies support a range of local nonprofits and they solicit community input on important matters such as rate cases and infrastructure upgrades.

"I have personal conversations with stakeholders who have questions about a rate case. If a customer calls and wants to understand something, I pick up the phone."
— Tim Smith, Northwest Regional Manager



Treated wastewater yields a gift for a local nonprofit

Every year treated wastewater from our Sunriver Environmental plant irrigates a bountiful crop of orchard grass hay. In 2022 the utility donated the entire crop—70 tons of hay—to Healing Reins Therapeutic Riding Center in nearby Bend, Oregon. Healing Reins offers nationally accredited programs that incorporate specially trained horses into therapy for people with a wide range of disabilities and challenges. In partnership with the local medical community and more than 100 volunteers, the organization serves 190+ children, teens, adults and veterans every week.

Employees

Attracting and retaining a talented workforce is vital to the success of NW Natural Water, and we continuously look for ways to meet the needs of the dedicated employees who keep our water businesses running smoothly.

In 2022, NW Natural Water conducted its third employee engagement survey with 80% of employees participating, and 95% reported that they take pride in their work and in the company. In addition, 89% of NW Natural Water employees described themselves as engaged—compared with just 32% of employees nationwide in 2022.

89%

Employees engaged, committed, and enthusiastic about their work at NW Natural Water

95%

Employees proud to work for NW Natural Water

94%

Believe their company provides excellent service to customers

Employees also agreed or strongly agreed with the following:

- We demonstrate safe work practices in our work area (93%)
- In my work area, we operate with integrity and ethical conduct (95%)
- We engage with customers and community in a way that values diversity and inclusion (98%)

Smaller water systems often experience challenges providing competitive compensation packages for their employees. We continue to seek opportunities to bring our employees' wages in line with market rates, and we do an annual wage analysis of all subsidiaries to make sure we're staying competitive.

Partnering with NW Natural Water has also enabled our water utilities to provide benefits they weren't previously able to offer, including formalized paid time off programs, 401(k) retirement accounts and participation in the NW Natural Holdings' employee stock purchase program. At the end of 2022 we launched a package that pays for 75% of medical and dental coverage for employees and their dependents. Prior to being acquired by NW Natural Water earlier in the year, employees at our Foothills Utilities subsidiary in Arizona had been paying 50% of the cost for medical insurance, and the coverage didn't cover dependents.

In 2022, all active NW Natural Water employees completed annual ethics and compliance training in support of a culture that mitigates risk and promotes integrity and ethical behavior.



We're Committed

We're committed to managing our water and wastewater systems responsibly, and we intend to continue focusing on the following priorities:

- Maintaining and investing in systems as aging infrastructure needs to be replaced
- Providing financial capital for infrastructure improvements
- Complying with increased and expanding regulation for water and wastewater systems
- Monitoring for contamination and proactively addressing emerging threats from climate change and natural disasters
- Implementing new technologies, including cybersecurity measures
- Attracting and developing talented employees, as well as managing an aging workforce



For more information see also:
[NW Natural Water](#)

NW Natural Renewables

NW Natural Renewables is a competitive business committed to leading in the energy transition by providing renewable fuels to support decarbonization in the utility, commercial, industrial and transportation sectors.



NW Natural Renewables

Building on a long-standing commitment to a lower-carbon future, we launched a competitive renewable fuels business in 2021. As a subsidiary of NW Natural Holdings, NW Natural Renewables is well positioned to support the energy transition through the supply of lower-carbon fuels to the utility, commercial, industrial and transportation sectors. Our experienced team is focused on providing decarbonization solutions by utilizing waste streams and renewable energy sources to supply renewable natural gas (RNG) and provide customers with cost-effective sustainable solutions. These efforts are separate from and in addition to NW Natural's gas utility efforts related to lower-carbon fuels.

With NW Natural Holdings' strong operational performance and success in reducing carbon emissions across its businesses, this expansion aligns with our core competencies. Our country and region are in the early stages of a historic energy transition, and we project the demand for renewable fuels will only continue to grow. NW Natural Renewables is equipped to help customers achieve their decarbonization goals and drive down emissions in our region and throughout the country.

In November 2021, we announced our first project with EDL, a leading global producer of sustainable distributed energy. NW Natural Renewables has contracted to provide approximately \$50 million toward the development of two production facilities that are designed to convert landfill waste gases to RNG and connect that production to the existing regional pipeline networks. Construction on both facilities began in 2022.

"With our competitive renewables strategy, we're able to assist a broader group of customers with the energy transition."

— David Anderson, NW Natural Holdings CEO

NW Natural Renewables and EDL executed agreements designed to obtain a 20-year supply of RNG produced by the facilities for NW Natural Renewables. NW Natural Renewables has separately contracted to sell an equivalent amount of fixed-volume RNG supply to investment grade counterparties under long-term contracts.

We recognize our role and responsibility in moving toward a lower-carbon energy future, and we remain focused on advancing other RNG investments that support this important transition.



For more information see also:

[NW Natural Renewables](#)

Sustainable Financings

Through our Sustainable Financing Framework, we can issue Sustainable Financing Instruments, helping us further support and contribute to the transition to a sustainable economy.



NW Natural Holdings supports sustainability in its financings. Under its Sustainable Financing Framework, NW Natural and its subsidiaries may issue Green Bonds, Social Bonds, Sustainability Bonds, or other financial instruments to invest in a lower-carbon, sustainable economy. In addition, NW Natural and NW Natural Holdings' credit facilities have provisions that link borrowing costs to environmental and safety metrics.

Sustainable bond allocated in 2022

NW Natural issued its [inaugural sustainable bond](#) in November 2021, and net proceeds from the issuance totaled \$129 million. By the end of 2022, 100% of the amounts equivalent to the proceeds were allocated to finance or refinance projects in one of four eligibility categories: renewable energy, energy efficiency, green buildings, and our supplier diversity program. Funds were allotted to the following NW Natural initiatives:

- Renewable natural gas investments and procurement
- Energy efficiency programs
- Seismically secure and more sustainable headquarters building, which is LEED core and shell gold certified
- Purchases from or support of culturally or racially diverse-owned, women-owned, veteran-owned, LGBTQIA+-owned and/or small businesses

An independent accountants' [report](#) confirmed these allocations.

Sustainable bond and Sustainable Financing Framework

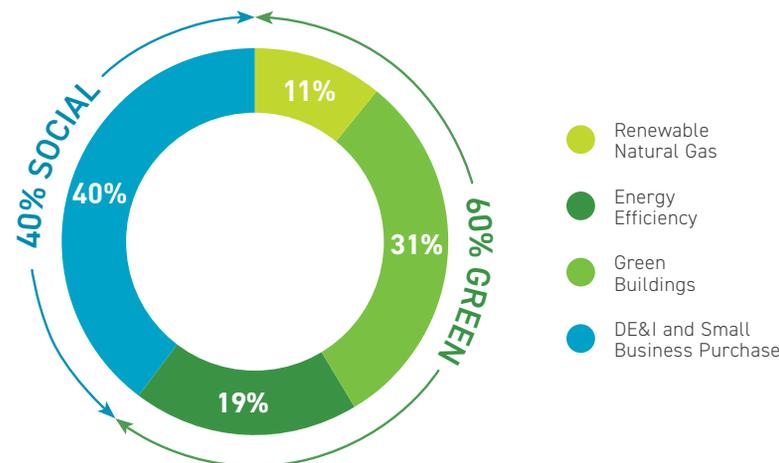
NW Natural Holdings and NW Natural can each issue sustainable bonds under our Sustainable Financing Framework, with an amount equivalent to the proceeds of the bond issuance being used to finance or refinance projects related to renewable energy, energy efficiency, green buildings, and our supplier diversity program. The framework has been reviewed by Vigeo Eiris (V.E), an independent global provider of ESG research and analysis.

V.E issued a second-party opinion confirming that the framework aligns with the four core components of the [Sustainable Bond Principles 2021](#) and that investments in the eligible categories will lead to positive environmental and social impacts and advance the UN Sustainable Development Goals (SDGs). V.E is a participant in the United Nations Global Compact.

In line with sustainable standards, NW Natural has agreed to publish an annual report to track the financing of sustainable projects and their associated environmental and social impacts, where feasible. The framework, together with the V.E opinion, are available on NW Natural's Sustainability webpage. For more information on our SDG eligible categories, see the Appendix.

The allocation of net proceeds was 60% to green initiatives and 40% social projects.

ALLOCATION OF NET PROCEEDS BY ELIGIBLE PROJECT CATEGORY



Sustainability-linked Credit Facility

In November 2021, NW Natural Holdings and NW Natural each amended and restated its revolving credit facility, resulting in the extension of the maturity date to November 3, 2026, and an increase in NW Natural Holdings and NW Natural's total borrowing capacity to \$600 million. The amendments include provisions that link each Company's borrowing costs to an environmental metric related to NW Natural's carbon savings goal of 30% by 2035 and a safety metric related to in-line inspections of NW Natural's transmission pipeline.

"With these financings, we've incorporated sustainability—a long-held focus of our company—into another important component supporting our business strategy."

— David Anderson, NW Natural Holdings CEO

Governance

Strong corporate governance and integrity form the foundation for everything we do. Our board strives to adopt and maintain appropriate corporate governance practices. And we expect our employees to do what is right for our stakeholders, conduct business ethically, act with accountability, and work with business partners who share our high standards and principles. Our [2023 Proxy Statement](#) provides a full discussion of our governance practices.

"The role of boards in setting long-term strategic direction has perhaps never been more important."

— World Economic Forum⁶⁵

⁶⁵ How company boards can be a vanguard for climate action | World Economic Forum ([weforum.org](https://www.weforum.org))

Governance Highlights



Board of Directors

- Maintain a well-qualified, diverse and active board of directors
- Determine independence of directors (10 of 11 directors meet independence criteria)
- Engage in robust succession planning process supporting board refreshment (nearly one-half of our directors are new within the last five years)
- Separate roles of Chair and CEO under current leadership structure
- Hold regular executive sessions of non-management directors
- Oversee company's risk management programs and policies
- Evaluate board of directors, committees and individual directors on an annual basis
- Provide comprehensive director orientation and continuing education to enable directors to develop and maintain skills necessary or appropriate for the performance of their duties



Other Governance Practices

- Maintain stock-ownership guidelines
- Maintain insider trading policy applicable to directors, officers and employees, agents, advisors and independent contractors
- Maintain a hedging and pledging policy applicable to directors and officers



Business Integrity and Ethics

- Maintain and promote an active ethics and compliance program
- Foster a culture that mitigates risk and promotes ethical behavior and integrity
- Recognized by Ethisphere® as one of the 2022 and 2023 World's Most Ethical Companies®

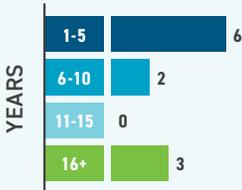
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OUR BOARD COMPOSITION

Tenure*

8.4

AVERAGE YEARS



Age*

66

AVERAGE YEARS



Governance Practices

Board of Directors

The Board of Directors of NW Natural Holdings establishes policies designed to promote management of our business, to serve our stakeholders and maximize long-term shareholder value, that we conduct our business in compliance with all applicable laws and regulations, and that we do so with the highest standards of integrity. For complete information on our approach to corporate governance, please visit the Governance portion of our website at nwnaturalholdings.com. The following sections highlight our approach to corporate governance.

Board composition and refreshment

The board is responsible for selecting candidates for board membership, and the governance committee and board of directors has been assigned the responsibility of recommending nominees to the board of directors for election as directors.

The governance committee reviews director nominees in the context of the current composition and diversity of the board, the operating requirements and existing and prospective business environment faced by NW Natural Holdings, NW Natural Holdings' business strategy, and the long-term interests of shareholders. Director candidates must be able to make a significant contribution to the governance of NW Natural Holdings by virtue of their business and financial expertise, educational and professional background, and current or recent experience as a chief executive officer or other senior leader of a public company or other relevant organization.

The business discipline that may be sought at any given time will vary depending on the needs and strategic direction of our company and the disciplines represented by our incumbent directors. In addition, the governance committee looks at the overall composition of the board and how a candidate would contribute to the overall synergy and collaborative process of the board. In conducting its assessment, the governance committee considers a variety of criteria, including, but not limited to, the candidate's integrity, reputation, judgment, knowledge, experience, commitment, skills, diversity, and independence.

In recent years, the board undertook a comprehensive succession planning and refreshment review in anticipation of the retirements of several long-tenured directors. In line with those plans, the board has undergone substantial refreshment in recent years, with 5 of the 10 current independent directors being added to the board in the last five years. Our corporate governance standards provide for several mechanisms to encourage director refreshment, including: annual peer reviews of individual directors, a requirement to offer notice of resignation upon a change in principal position, and a mandatory retirement age of 75.

COMMITMENT TO DIRECTOR INDEPENDENCE

The Board of Directors of NW Natural Holdings has adopted director independence standards that comply with New York Stock Exchange (NYSE) rules. The board of directors has affirmatively determined that 10 out of 11 directors are independent, according to NW Natural Holdings'



Board Refreshment*

5 out of 11 directors were first added to the board in the last five years



Gender Diversity*

5 out of 11 directors identify as women



Cultural and Racial Diversity*

3 out of 11 directors identify as culturally or racially diverse

Independence



10 out of 11 directors are independent (all directors except CEO)

■ Chairperson of the board is independent ■ CEO

Not to be used for investment purposes—see NW Natural and NW Natural Holdings most recent Form 10-Ks as updated by the most recent quarterly and periodic reports for information relevant to investment decisions.

director independence standards as well as additional qualifications prescribed under the listing standards of the NYSE and applicable state and federal statutes. All standing committees of the board are chaired by and currently comprised of independent directors. The current board leadership structure also separates the roles of chair and CEO and is designed to promote independence between board and management. Additionally, to support independence, the directors of the board meet regularly in executive sessions at which the independent board chair presides and only the non-management directors are present.

COMMITMENT TO BOARD DIVERSITY

NW Natural Holdings' director selection criteria include a consideration of diversity as a factor in evaluating candidates for board membership. The board believes that diversity with respect to factors such as background, experience, skills, geographic location, race, gender, ethnicity, culture, veteran status, age, disability, and sexual orientation are important considerations in board composition. The governance committee discusses diversity considerations in connection with each director candidate, as well as on a periodic basis in connection with the composition of the board as a whole. In addition, the governance committee and the board conduct formal self-evaluations each year that include an assessment of whether the governance committee and the board have adequately considered diversity, among other factors, in identifying and discussing director candidates. Currently, of 11 members of our board, five directors identify as women, including our Board Chair, and three directors identify as racially or culturally diverse. Our composition of women on our board has earned a "Winning Company" award three times from 50/50 Women on Boards, which described the board's gender diversity as a "shining example of enlightened business leadership." In 2023 our board received the highest distinction for Gender Balanced.

BOARD EXPERIENCE

NW Holdings' board consists of eleven directors with extensive professional experience and a diverse array of skills. This diversity of experience provides our board with a collective skill set that is advantageous to the board's oversight of our business and operations. In addition to the qualifications required of all directors that are set forth in NW Holdings' Director Selection Criteria, our board members have experience in climate change and decarbonization, cyber and IT, risk management, and more. More information on board experience can be found in our 2023 Proxy Statement.

Board's role in risk oversight

Management is responsible for managing the day-to-day risks faced by the company, while the board of directors, collectively and through its committees, has responsibility for the oversight of risk management.

The corporate governance standards describe the board's primary responsibilities, which include oversight of NW Natural Holdings' mission, and key programs that enable the board to assess and manage material risks, including, but not limited to, risks related to business continuity and disaster response, gas supply, distribution and storage operations, product safety, strategic planning and business development, environmental and climate change matters, business improvement and information technology, customer demand and market competition, economic environment, effective governance, legislative and regulatory risk and compliance, state and federal regulatory process and environment, financial performance, business integrity and compliance, financial reporting and internal controls, financing programs, pensions and retirement plans, reputational risk, human capital management, compensation and employee benefits, succession planning (including the CEO), human risks such as safety and diversity, equity and inclusion matters, environmental, social and governance matters and company culture. The board periodically reviews its committee oversight authority to ensure the board has adequate visibility and oversight of the company's key areas of risk to execute its responsibilities. Appropriate members of management serve as liaisons to board committees, attend board and committee meetings, and regularly discuss with the board and the committees various risks confronting the company.

An important aspect of the board's oversight role is the comprehensive enterprise risk management process, under which significant enterprise-wide risks have been identified and assessed with respect to likelihood of occurrence, potential impact on the business, and likely speed of onset, along with the mitigative measures to address and manage such risks. The enterprise risk management process allows the board to remain informed of risks, developing trends, or potential problems that might require their attention. Management conducts the enterprise risk management process annually with periodic interim updates and discusses those findings with the board and reports regularly to the board on significant risk categories. Additional review or reporting on enterprise risks is conducted as needed or requested by the board. The board and management consider enterprise risks and opportunities in their strategic and capital spending decision process and in their governance and oversight responsibilities.

Board structure and function

COMMITTEES

There are five standing committees of the board: Audit, Finance, Governance, Organization and Executive Compensation Committee (OECC), and Public Affairs and Environmental Policy. Each of the standing committees operates according to a formal written charter, all of which are reviewed annually and are available at nwnaturalholdings.com. Each committee is comprised entirely of independent directors.

BOARD AND COMMITTEE OVERSIGHT

The full board considers key risks, issues and initiatives. Board committees additionally have primary responsibility and oversight with respect to the following areas:

Audit Committee

- Oversight and evaluation of policies with respect to significant risks and exposures and the procedures for assessing, monitoring and managing those risks.
- Oversight of accounting, financial reporting, internal controls, auditing, information technology systems and cybersecurity, enterprise risk management process, business continuity and disaster planning, capital projects and contingencies, and material litigation.
- Oversight of business compliance and integrity program, including code of ethics, and the company's system for review and treatment of integrity hotline complaints.

Public Affairs and Environmental Policy Committee

- Oversight of legislative and regulatory matters and policies and practices on public and political issues, including charitable and political contributions and budgets.
- Oversight of current and emerging political and societal trends.
- Oversight of programs and policies relating to civic affairs, human rights, charitable and community affairs, safety, diversity, equity and inclusion, equal employment opportunities, employee well-being, customer engagement and other corporate social responsibility matters.
- Review and recommendation of environmental matters and policies and sustainability efforts.
- Review of major environmental risks, and plans for managing those risks.

Finance Committee

- Oversight of financing programs, budgets and forecasts, financial policy matters, including hedging policies and practices, economic environment, gas supply and pricing, including liquidity and cash flow impacts, and material regulatory issues, including regulatory policy related to financial strategy and policy, capital structure and dividend policy.
- Oversight of investor relations program, and credit agency and New York Stock Exchange relationships.
- Financial oversight of pension and retirement plans.
- Review and recommendation of finance aspects of corporate development strategies.

Organization and Executive Compensation Committee

- Oversight of company's human capital management.
- Review and recommendation of plans and preparations for talent succession and management of risks associated with transfer of knowledge and expertise.
- Recommendation of executive compensation programs and benefit plans to the board, as well as monitoring of risks and alignment of incentives related to such plans and programs.
- Review and approval of grants under equity incentive plans to eligible employees.
- Primary responsibility for ensuring executive compensation programs and plans are consistent with corporate objectives and OECC's compensation philosophy.

Governance Committee

- Recommendations to the board regarding nominees for election to the board, and committee composition and structure.
- Establishment of criteria for board and committee membership and policies that govern the board's activities.
- Review and recommendation of governance policies and structure, including the corporate governance standards, to the board.
- Evaluation of board and individual director performance and oversight of director onboarding and continuing education.
- Oversight and consideration of plans and preparations for board succession.
- Oversight of integrated environmental, social and governance matters.

MANAGEMENT LEADERSHIP

Our officer team is responsible for leading and managing our business and for developing and executing company strategy as approved by the board, and meets regularly to actively monitor operations, financial performance, and legal, regulatory, policy and other external developments; ensure compliance with policies, procedures and ethical business practices; identify, assess and manage company risks and opportunities; and develop and implement strategy to achieve sustainable, long-term performance. Each of our officers has identified goals in support of sustainable, long-term business performance, with a portion of their compensation tied to the achievement of these goals. We have a diverse group of corporate officers and have expanded the number of women in leadership positions. Today, our 12-person officer team includes five women.

ESG governance and oversight

While our executives are responsible for day-to-day management and leadership of the company, the Board of Directors has responsibility for oversight of management and its development and implementation of company strategy, including ESG matters and risks and opportunities, including those related to climate and cybersecurity. The Governance Committee oversees the company's integrated ESG strategy and reviews its full board and committee oversight authority to ensure that the board has adequate visibility and oversight to execute its responsibilities. In order to assist the Governance Committee in its ESG oversight responsibilities, management provides formal ESG updates to the Governance Committee at each regularly scheduled meeting (approximately five times per year). In addition, appropriate members of management serve as liaisons to board committees, attend board and committee meetings, and regularly discuss with the board matters relevant to the company, including ESG matters and the company's risks and opportunities. Areas of ESG oversight include, but are not limited to:

Audit

- Business Integrity
- Whistleblower Hotline
- Enterprise Risk Management
- Business Continuity
- Significant Legal Matters
- Internal Controls Over Financial Reporting
- SEC Reporting Oversight
- Cybersecurity and IT

Board

- Decarbonization; Including Low Carbon Pathway and Vision 2050
- Customer Preference/Satisfaction
- Tone at the Top
- Operational and Business Development Initiatives (e.g., Water and RNG)
- Other Natural Gas Applications
- Strategic Matters
- Pipeline Safety

Public Affairs and Environmental Policy

- Employee Safety
- Diversity, Equity and Inclusion
- Employee Engagement and Well-Being
- Civic and Human Rights
- Environmental and Sustainability
- Community and Public Relations
- Charitable Giving and Political Contributions
- Legislative and Regulatory Matters
- Employee Satisfaction
- Procurement
- Customer Metrics, Engagement and Affordability Considerations

Organization and Executive Compensation

- Compensation and Benefit Programs, Including Alignment of Incentives with ESG
- Talent Strategy and Succession
- CEO Succession
- Labor Relations
- Employee Attrition Rates

Governance

- Board Structure, Policies, Governance and Expectations
- CEO and Board Succession Planning
- Board Composition, Diversity and Independence
- Board Evaluations
- Committee Oversight Roles/Responsibilities
- Continuing Board Education and Training
- ESG Strategy (incl. developments from SEC, Major Shareholders, and Other Stakeholders)

Finance

- Financial Policies and Matters That May Have ESG Implications
- Investor Relations
- Goal Setting and Performance Metrics
- Rating Agency Relationships
- Capital Markets/Green Financings
- Investment in Key ESG Improvements

Management ESG leadership

Each of our officers is responsible for developing and implementing our business strategy and lead areas that are considered ESG. For example, our VP and Chief Public Affairs and Sustainability Officer leads our environmental management and sustainability, legacy environmental programs, community and government affairs and community involvement teams. Our VP, Chief Human Resources and Diversity Officer leads our safety, employee and labor relations, organizational effectiveness, diversity, equity and inclusion and human resources and benefits teams. Our VP, Chief Compliance Officer and Corporate Secretary leads our governance and business integrity and compliance teams and co-leads our ESG Steering Committee, a cross functional group of executives and senior management that meets regularly to discuss the Company's ESG strategy, implementation and disclosure. Each of these officers report directly to the CEO or President and serve as an executive liaison to a relevant committee of the Board of Directors. Also reporting directly to our President, our SVP and Chief Operating Officer heads our efforts to pursue a lower-carbon pathway, which includes reimagining the fuel we put in our pipelines, pursuing a carbon savings goal of 30% by 2035 educating stakeholders on the role of gas today and in a deep decarbonization future, and managing pipeline integrity and safety. In addition, our President leads teams focused on procuring renewable natural gas, pursuing hydrogen gas initiatives, and furthering our acquisitions of water and wastewater utilities. Our Chief Financial Officer, VP, Treasurer, and Chief Accounting Officer oversees our sustainable financing and sustainable procurement efforts. And, our VP and Chief Information Officer, leads our cybersecurity and compliance, and information technology (IT) teams. Each of our officers have identified goals in support of sustainable, long-term business performance attentive to ESG matters, with a portion of their compensation tied to the achievement of these goals. Our 12-person officer team meets regularly to discuss the development and implementation of company strategy, including sustainability matters.

Stock ownership requirements

To closely align director interests with shareholder interest, the board has adopted stock-ownership guidelines that require directors to own NW Natural Holdings shares of at least \$400,000 in value within five years of joining the board. Similarly, executive officers are required to hold stock at a dollar value that is a multiple of base salary, with the CEO holding five times their annual salary, the president holding four times their annual salary, executive vice president or chief operating officer holding three times their annual salary, senior vice presidents or named executive officers holding two times their annual salary and vice presidents holding one times their annual salary.



Insider trading

To foster integrity in trading in NW Natural Holdings stock, the company maintains an insider trading policy that specifies that if a director, officer, any employee of NW Natural Holdings or its subsidiaries, has material nonpublic information relating to the company, it is the company's policy that neither that person nor any related person may buy or sell securities of the company or engage in any other action to take advantage of, or pass on to others, that information.

Policy on hedging and pledging of NW Natural Holdings securities

NW Natural Holdings has adopted a policy on hedging and pledging of securities that prohibits the directors and executive officers of the company and its subsidiaries from engaging in any short sales, zero-cost collars, or forward sale contracts with respect to the company's securities, or purchasing or selling puts, calls, options, or other derivatives securities based on the company's securities. In addition, the policy restricts the ability of directors and executive officers to pledge their ownership of company securities in a non-recourse loan, failing to meet a margin call with respect to a margin account resulting in the sale of company stock, or buying company securities on non-recourse margin.

Business Integrity

Since 1859, NW Natural has been viewed as a respected leader in Oregon and SW Washington. We could not have maintained this reputation for over 160 years without one fundamental characteristic—integrity. Our customers trust us to provide them with essential energy and deal with them fairly, in a caring and equitable fashion. Our business integrity program aims to reinforce our core values in our everyday work.

We are honored to have been recognized as one of the 2023 World's Most Ethical Companies® by Ethisphere, a global leader in defining and advancing the standards of ethical business practices. It is the second year NW Natural Holdings has been recognized and the company is one of only nine honorees in the Energy & Utilities industry. In all, 135 honorees from 19 countries and 46 industries were recognized for their commitment to ethical business practices through programs that positively impact employees, communities, and broader stakeholders.

“Receiving this distinction underscores our commitment to our values and honors our employees' achievements on behalf of our customers,”

— David Anderson, NW Natural Holdings CEO

Oversight of Business Integrity program

Our Business Integrity program is overseen by the Audit Committee of the Board of Directors and is managed on a day-to-day basis by our business integrity team, which is a cross-functional team led by our chief compliance officer and consisting of members of the internal audit, legal and human resources departments. Our chief compliance officer and director of internal audit each regularly provide updates on business integrity matters to the Audit Committee of the Board of Directors, including updates on business integrity reports, management actions, business integrity trends and updates, and benchmarking analysis.

Code of Ethics

We maintain a Code of Ethics that applies to all of our employees, including supervisors, managers and officers, as well as to our board of directors and other agents, vendors and business partners working on our behalf. Our Code of Ethics is intended to set expectations for conduct that is consistent with our core values; help promote compliance with laws and NW Natural policies; establish our high standards of integrity; and provide information about how to resolve real-life questions or concerns. Employees are required to annually certify their commitment to the

principles outlined in the Code of Ethics and disclose any business integrity concerns. Our Code of Ethics is approved annually by the board upon the review and recommendation of the Audit Committee of the Board of Directors.

Code of Ethics training and communications

To reinforce the company's core value of integrity, every employee and director completes an annual online Code of Ethics training to refresh their understanding of the company's Business Compliance and Integrity Program and Code of Ethics. NW Natural's program received the national award for Best Ethics and Compliance Program (Small and Mid-Cap) at the 2018 Corporate Governance Awards event, in recognition of its new Code of Ethics document and refreshed online training and certification program. The Code of Ethics training covers a number of topics including, but not limited to conflicts of interest, non-retaliation, anticorruption/anti-bribery, fair business dealings, compliance with laws, government relations, confidentiality, politics in the workplace, and social media, among other things.

Starting in 2019, all employees also complete annual online information security training. The course demonstrates how to identify potential cybersecurity risks and protect confidential information at work and provides guidance on what employees should do if they suspect a possible information security incident. In 2022, 100% of our active employees participated in these online information security and ethics and compliance trainings. We also regularly provide specialized live training to help managers and supervisors navigate pertinent business integrity questions and emphasize their role as the front line of integrity at NW Natural and the resources available to them.

We reinforce our annual Code of Ethics and Information Security trainings with periodic communications spotlighting pertinent business integrity topics and messages from senior leadership. We also provide additional resources to employees via an internal intranet page dedicated to business integrity.



“World's Most Ethical Companies” and “Ethisphere” names and marks are registered trademarks of Ethisphere LLC

Reporting, investigations and actions

We maintain our Integrity Hotline to empower employees, shareholders, customers, the public and other third parties to raise issues or submit concerns anonymously at 1-866-546-3696 or NWNIntegrity.com, which is managed by a third party and is available through our external and internal websites. Our hotline offers employees and others the opportunity to anonymously ask questions about ethical decisions. We also provide several other avenues to raise issues or report concerns in addition to our hotline.

Our chief compliance officer and our director of internal audit handle matters reported on the hotline and through other reporting avenues. Both regularly report to the audit committee regarding hotline activity, and the chief compliance officer regularly reports to the audit committee regarding our Business Compliance and Integrity program.

NW Natural is committed to investigating all potential violations of law, company policy or business integrity and handling each report fairly and reasonably. In 2022, we received 22 interactions with our hotline and other business integrity reporting channels (approximately 1.7 per 100 employees), of which 16 (approximately 1.3 per 100 employees) were determined to involve business integrity reports. Business integrity reports are reviewed by our Business Integrity team and investigated as necessary with assistance from the company's internal audit, human resources, legal, or other departments and/or other internal or external resources as appropriate under the circumstances, depending on the type and nature of the allegation. When violations are detected, appropriate actions are taken, which may include coaching or counseling, administering disciplinary action, up to and including termination and/or improvements to our policies, procedures or practices.

We maintain a [Violation Reporting Policy](#), approved by the Audit Committee of the Board of Directors, that prohibits retaliation and offers protections for individuals that make good faith reports of possible violations of the Code of Ethics, company policy or law or who participates in an investigation in good faith. Employees who have engaged in retaliation may face disciplinary action, up to and including termination. We proactively communicate our prohibition on retaliation in multiple forums including our annual Code of Ethics Training, manager trainings, integrity website and periodic communications to employees.



Supplier Code of Ethics and fair business dealings

We seek to do business with organizations and service providers that embrace our core values, including integrity. We maintain a Supplier Code of Ethics, which is available on our [supplier website](#) and sets forth our expectations for our suppliers in areas of ethics and compliance, safety, human rights, and diversity, among other things. Under the Supplier Code, suppliers have a responsibility to report any suspected illegal or unethical conduct involving NW Natural or its business partners, and NW Natural's business integrity hotline is available to suppliers and other third parties to anonymously report concerns. We monitor key suppliers on an ongoing basis and have implemented a scorecard for certain vendors that considers whether such vendor operated in accordance with our core values in doing business with us.

As set forth in our Code of Ethics, we strive to deal fairly and in good faith with NW Natural's customers, shareholders, employees, regulators, suppliers, competitors and others. We strive to avoid any attempt to take unfair advantage of any person through manipulation, misrepresentation, fraud, misuse of confidential information or any other unethical dealing, practice or act. Our Code of Ethics sets forth our policies and expectations regarding fair business dealings, including our expectations regarding expenses, purchasing and contracting, gathering competitive data, and engaging in transactions between utility and non-utility subsidiaries. Our Code of Ethics also sets forth our strict prohibition on bribes and kickbacks. In 2022, we received zero substantiated reports of bribery or corruption through our Integrity Hotline.



For more information see also:
[Governance website](#)



APPENDIX

Sustainability Accounting Standards Board (SASB) Disclosures

Workforce Statistics

NW Natural Eligible Categories from UN Sustainable Development Goals

NW Natural's Emissions

American Gas Association Template

NORTHWEST NATURAL HOLDING COMPANY SASB DISCLOSURES

For the year ended Dec. 31, 2022

The following index sets forth Northwest Natural Holding Company's SASB reporting disclosures for our primary industry, Gas Utilities & Distributors. While we report information on nearly all of SASB's metrics, we may report a different unit of measure, different metric or partial information for the topic area or accounting metric as noted. Unless otherwise noted, data in the below SASB disclosure is as of, or for the year ended December 31, 2022.

Gas Utilities & Distributors Accounting Standard

ENERGY AFFORDABILITY		
SASB CODE	ACCOUNTING METRIC	2022 DISCLOSURE RESPONSE
IF-GU-240a.1	Average retail gas rate for residential customers ⁶⁶ per MMBtu	\$10.47
	Average retail gas rate for commercial customers ⁶⁶ per MMBtu	\$9.50
	Average retail gas rate for industrial customers ⁶⁶ per MMBtu	\$7.60
	Average retail gas rate for transportation services ⁶⁶ per MMBtu	\$1.13
IF-GU-240a.2	Typical monthly gas bill for residential customers for 50 MMBtu of gas delivered per year ⁶⁷ (USD)	\$51.65
	Typical monthly gas bill for residential customers for 100 MMBtu of gas delivered per year ⁶⁷ (USD)	\$95.30
IF-GU-240a.3	Number of residential customer gas disconnections for nonpayment, percentage reconnected within 30 days	Approx. 3,513 within 20 days ⁶⁸ 2022 Community & Sustainability Report, "Our Communities, Our Customers"
	Percentage of residential customer gas disconnections for nonpayment reconnected within 30 days	66% reconnected within 20 days ⁶⁸ 2022 Community & Sustainability Report, "Our Communities, Our Customers"
IF-GU-240a.4	Discussion of impact of external factors on customer affordability of gas, including the economic conditions of the service territory	2022 Community & Sustainability Report, "Our Communities, Our Customers"

⁶⁶ Weighted average rates from 11/1/21-10/31/22.

⁶⁷ Based on weighted average rates for the heating year beginning 11/1/2021 and ending 10/31/2022.

⁶⁸ NW Natural reports reconnections within 20 days rather than 30 days, consistent with our internal practice regarding measurement and reporting of reconnections.

END-USE EFFICIENCY		
SASB CODE	ACTIVITY METRIC	2022 DISCLOSURE
IF-GU-420a.1	Percentage of gas utility revenues from rate structures that are decoupled	81%
	Percentage of gas utility revenues from rate structures that contain a lost revenue adjustment mechanism	0%
IF-GU-420a.2	Customer gas savings from efficiency measures by market (MMBtu)	Oregon Service Territory: 514,000 • Washington Service Territory: 43,000 2022 Community & Sustainability Report, "Reducing Energy Use"
INTEGRITY OF GAS DELIVERY INFRASTRUCTURE		
SASB CODE	ACTIVITY METRIC	2022 DISCLOSURE
IF-GU-540a.1	Number of federally reportable pipeline incidents	0
	Number of federal corrective action orders	0
	Number of federal notices of probable violation	0
IF-GU-540a.2	Percentage of distribution pipeline that is cast and/or wrought iron	0%
	Percentage of distribution pipeline that is unprotected steel	0%
IF-GU-540a.3	Percentage of gas transmission pipelines inspected	70% as of December 31, 2022 ⁶⁹
	Percentage of gas distribution pipelines inspected	20% ⁷⁰
IF-GU-540a.4	Description of efforts to manage the integrity of gas delivery infrastructure, including risks related to safety and emissions	2022 Community & Sustainability Report, "Safety & Reliability", "Environmental Stewardship"

⁶⁹ Pipeline inspected through December 31, 2022, but not limited to inspections during the calendar year 2022. As of December 31, 2022, we inspected 70% of our pipeline, 2.5 times the number required by 49 CFR 192.903 and reassess covered pipelines every seven years as set forth in 49 CFR §192.939(l) by the Pipeline and Hazardous Materials Safety Administration (PHMSA).

⁷⁰ We strive to perform a leak survey on 20% of our gas mains annually, with every gas main surveyed at least every five years. We also strive to perform leakage and atmospheric corrosion surveys every three years on residential service lines and annually in business districts and high-occupancy buildings.

ACTIVITY METRICS

SASB CODE	ACTIVITY METRIC	2022 DISCLOSURE
IF-GU-000.A	Number of residential customers served	724,287
	Number of commercial customers served	69,139
	Number of industrial customers served	1,071
IF-GU-000.B	Amount of natural gas delivered to residential customers (MMBtu)	47,809,264
	Amount of natural gas delivered to commercial customers (MMBtu)	28,849,912
	Amount of natural gas delivered to industrial customers (MMBtu)	10,444,412
	Amount of natural transferred to a third party (MMBtu)	38,130,074
IF-GU-000.C	Length of gas transmission pipelines	736 miles
	Length of gas distribution pipelines	14,300 miles

NORTHWEST NATURAL GAS COMPANY WORKFORCE STATISTICS

For the payroll ending December 31, 2022

The following table sets forth Northwest Natural Gas Company's consolidated EEO-1 data as submitted for the payroll period 12/15/2022 through 12/31/2022

JOB CATEGORIES	HISPANIC OR LATINO		NOT-HISPANIC OR LATINO												OVERALL TOTALS
	MALE	FEMALE	MALE						FEMALE						
			WHITE	BLACK OR AFRICAN AMERICAN	NATIVE HAWAIIAN OR PACIFIC ISLANDER	ASIAN	AMERICAN INDIAN OR ALASKAN NATIVE	TWO OR MORE RACES	WHITE	BLACK OR AFRICAN AMERICAN	NATIVE HAWAIIAN OR PACIFIC ISLANDER	ASIAN	AMERICAN INDIAN OR ALASKAN NATIVE	TWO OR MORE RACES	
EXECUTIVE/SR OFFICIALS & MGRS	2	0	24	0	0	2	0	0	16	0	0	0	0	0	44
FIRST/MID OFFICIALS & MGRS	3	2	85	2	1	8	1	2	35	2	0	1	2	1	145
PROFESSIONALS	13	10	169	7	2	18	4	8	107	5	0	17	2	3	365
TECHNICIANS	0	0	1	0	0	0	0	0	1	0	0	1	0	0	3
SALES WORKERS	0	0	2	0	0	0	0	0	2	0	0	0	0	0	4
ADMINISTRATIVE SUPPORT	2	6	30	5	0	2	1	1	60	13	2	5	1	9	137
CRAFT WORKERS	26	0	303	7	3	9	19	4	5	1	0	0	0	0	377
OPERATIVES	2	1	48	2	1	2	0	2	4	0	0	0	0	0	62
LABORERS & HELPERS	1	0	3	1	0	0	0	1	0	0	0	0	0	0	6
SERVICE WORKERS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	49	19	665	24	7	41	25	18	230	21	2	24	5	13	1,143
PREVIOUS REPORT TOTAL	47	17	686	25	4	33	27	9	249	23	2	24	4	11	1,161

NW Natural Eligible Categories from UN Sustainable Development Goals

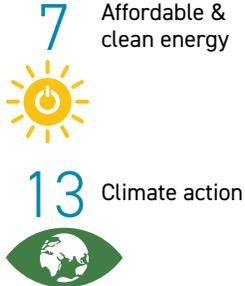
Renewable Energy

Expenditures and investments related to the construction, development, expansion, production, acquisition, maintenance, transmission, research and development, and operation of renewable energy generation and infrastructure including:

- Renewable natural gas
- Hydrogen

The purchase of renewable energy from renewable natural gas and hydrogen facilities.

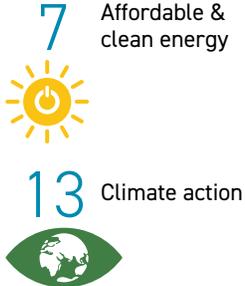
UN SDG ALIGNMENT⁷¹



Energy Efficiency

Programs to aid customers with energy efficiency.

UN SDG ALIGNMENT⁷²



Green Buildings

Expenditures related to the new construction/renovation, development, expansion, maintenance, rent or operation of offices or service centers that have received or are expected to receive LEED Gold or Platinum.

UN SDG ALIGNMENT⁸⁸



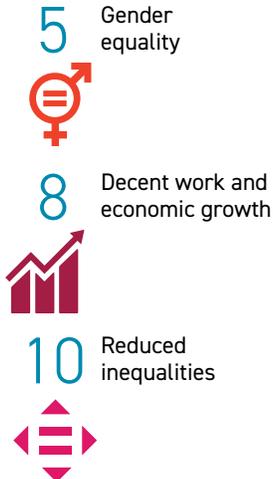
Our Partners: Our Supplier Diversity Program

Socioeconomic Advancement & Empowerment

Diverse Supplier Procurement and Empowerment—expenditures and program investments related to enabling opportunities for diverse business enterprises (minority-owned, women-owned, veteran-owned, LGBTQ-owned, and/or small businesses). Examples include:

- Procurement of products and services from diverse and small business suppliers
- Programs that empower diverse and small businesses through training, education on potential business opportunities and mentoring programs

UN SDG ALIGNMENT⁷²



⁷¹ <https://sdgs.un.org/goals>

⁷² Renewable natural gas will follow the European Union directive 2018/2001 on feedstock for advanced biofuels.

NW Natural's Emissions

In 2022, scope 2 emissions calculations were expanded to include all electricity usage, not just our main facilities' emissions. Due to increasing amounts of renewable electricity serving our locations, our scope 2 emissions were lower in 2022 than in previous years. Increases in scope 1 emissions since 2020 are generally attributable to changes in operations such as building capacity as employees return to the office.

NW NATURAL'S EMISSIONS

	2022	2021	2020
Fugitive Methane Emissions Rate ⁷³	0.126%	0.131%	0.135%
Scope 1 Emissions ⁷⁴	102,496 MTCO ₂ e	97,113 MTCO ₂ e	92,043 MTCO ₂ e
Scope 2 Facility Emissions (electricity use) ⁷⁵	2,398 MTCO ₂ e	2,972 MTCO ₂ e	2,312 MTCO ₂ e
Scope 2 Total Emissions (electricity use) ⁷⁶	2,646 MTCO ₂ e	N/A - information not available to perform calculation	

⁷³ Fugitive emissions calculated in accordance with EPA's 40 CFR part 98 subpart W. Percentage is calculated by metric tons of fugitive emissions divided by volume of gas delivered through our system. MMscf of methane emissions per MMscf of methane throughput.

⁷⁴ Includes NW Natural's use of gas footprint, fleet fuel carbon footprint, and natural gas fugitive emissions from system operations. Company use of gas footprint includes emissions from direct use of gas by NW Natural, including space and water heat, line heaters, compressors and other natural gas equipment, and calculations use emission factors from 40 CFR Part 98 Subpart C Table C-1 and C-2. Fleet fuel carbon footprint includes all NW Natural fleet fuel combustion associated with operating fleet vehicles (including diesel, gasoline, and CNG vehicles), and fleet equipment, and calculations use emissions factors for CO₂ from Appendix H of US EIA Instructions for Form EIA-1605. Natural gas fugitive emissions from system operation are calculated in accordance with EPA's 40 CFR part 98 subpart W.

⁷⁵ Includes data from electricity data from utility bills from facilities and legacy environmental accounts. Calculated by multiplying electricity usage at each facility by the emissions factor for the corresponding electric utilities (published in 2021 by the Oregon Department of Environmental Quality and 2020 by the Washington Department of Commerce). Scope 2 Facility Electricity Emissions represent 12 months of electricity usage at the 18 main facilities operated by NW Natural. Due to the meter reading dates on the utility bills this value is approximate.

⁷⁶ Includes data from utility bills from all NW Natural sites including legacy environmental accounts, rectifier, and telecom sites. Calculated by multiplying electricity usage at each facility by the emissions factor for the corresponding electric utilities (published in 2021 by the Oregon Department of Environmental Quality and 2020 by the Washington Department of Commerce).



Gas Company ESG/Sustainability Quantitative Information

Parent Company: NW Natural Holdings
Operating Company(s): NW Natural
Business Type(s): Natural Gas Local Distribution Company
State(s) of Operation: OR & WA
Regulatory Environment: Regulated
Report Date: 2022

Ref. No.	Refer to the "Definitions" column for more information on each metric.	2020	2021	2022	Definitions
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Natural Gas Distribution

Ref. No.	Metric	2020	2021	2022	Definitions
1	METHANE EMISSIONS AND MITIGATION FROM DISTRIBUTION MAINS				
1.1	Number of Gas Distribution Customers	774,476	785,897	794,497	
1.2	Distribution Mains in Service				These metrics should include all local distribution companies (LDCs) held by the Parent Company that are above the LDC Facility reporting threshold for EPA's 40 C.F.R. 98, Subpart W reporting rule.
1.2.1	Plastic (miles)	7,590	7,697	7,799	
1.2.2	Cathodically Protected Steel - Bare & Coated (miles)	7,285	7,277	7,269	
1.2.3	Unprotected Steel - Bare & Coated (miles)	0	0	0	
1.2.4	Cast Iron / Wrought Iron - without upgrades (miles)	0	0	0	
1.3	Plan/Commitment to Replace / Upgrade Remaining Miles of Distribution Mains (# years to complete)				These metrics should provide the number of years remaining to take out of service, replace or upgrade cathodically unprotected steel mains, and cast iron/wrought iron mains, consistent with applicable state utility commission authorizations.
1.3.1	Unprotected Steel (Bare & Coated) (# years to complete)	0	0	0	Optional: # yrs by pipe type.
1.3.2	Cast Iron / Wrought Iron (# years to complete)	0	0	0	Optional: # yrs by pipe type.
2	Distribution CO ₂ e Fugitive Emissions				<u>Fugitive methane</u> emissions (not CO ₂ e combustion emissions) stated as CO ₂ e, as reported to EPA under 40 CFR 98, Subpart W, sections 98.236(a)(3)(ix)(D), 98.236(r)(1)(v), and 98.236(r)(2)(v)(B) - i.e., this is Subpart W methane emissions as input in row 2.2 below and converted to CO ₂ e here. This metric should include fugitive methane emissions above the reporting threshold for all natural gas local distribution companies (LDCs) held by the Parent Company that are above the LDC Facility reporting threshold for EPA's 40 C.F.R. 98, Subpart W reporting rule. <u>Calculated value based on mt CH₄ input in the 2.2 (below).</u>
2.1	CO ₂ e Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	66,301	66,257	66,670	
2.2	CH ₄ Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	2,652	2,650	2,667	<u>INPUT VALUE (total mt CH₄) as explained in definition above. Subpart W input is CH₄ (mt).</u>
2.2.1	CH ₄ Fugitive Methane Emissions from Gas Distribution Operations (MMSCF/year)	138	138	139	
2.3	Annual Natural Gas Throughput from Gas Distribution Operations in thousands of standard cubic feet (Mscf/year)	108,040,414	111,461,397	116,408,812	This metric provides gas throughput from distribution (quantity of natural gas delivered to end users) reported under Subpart W, 40 C.F.R. 98.236(aa)(9)(iv), as reported on the Subpart W e-GRRT integrated reporting form in the "Facility Overview" worksheet Excel form, Quantity of natural gas delivered to end users (column 4).
2.3.1	Annual Methane Gas Throughput from Gas Distribution Operations in millions of standard cubic feet (MMscf/year)	102,638	105,888	110,588	
2.4	Fugitive Methane Emissions Rate (Percent MMscf of Methane Emissions per MMscf of Methane Throughput)	0.1%	0.1%	0.1%	Calculated annual metric: (MMSFC methane emissions/MMSCF methane throughput)

Human Resources

See Safety and People & Culture sections for more information

Additional Metrics (Optional)

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Forward-Looking Statements

This report and other materials prepared by NW Natural Holdings from time to time may contain forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements can be identified by words such as "anticipates," "assumes," "continues," "could," "intends," "plans," "seeks," "believes," "estimates," "expects" and similar references to future periods. Examples of forward-looking statements include, but are not limited to, statements regarding the following: plans, objectives, assumptions, estimates, expectations, timing, goals, strategies, commitments, future events, investments, projections, expectations, outlooks, commitments, intentions, acquisitions and timing, completion and integration thereof, infrastructure investments, safety and implementation of safety initiatives and expected benefits, system inspections, system modernization, improvements and reliability, infrastructure resiliency, gas storage capabilities, business continuity and emergency preparedness measures, damage prevention measures, risk management programs, commodity costs and sourcing, competitive advantage, marketing, service territory, customer service, customer and business growth, customer satisfaction ratings, weather and ability to serve customers during weather events, customer rates, customer affordability and bill payment assistance initiatives, customer preference, business risk, efficiency of business operations, operational performance and costs, business development and new business initiatives, water and wastewater industry, acquisitions, partnerships and investments including timing, completion and integration of such investments and related operational initiatives, financial positions and performance, economic and housing market conditions, trends and performance, capital expenditures, technological and equipment innovations and investments, cybersecurity initiatives and investments, strategic goals and visions and our communication of such goals and visions, environmental initiatives and expected outcomes, matters related

to climate change, greenhouse gas reduction and the role of natural gas and the gas delivery system, including use of and demand for renewables, carbon emissions, targets and savings, renewable natural gas projects or investments and timing, and completion thereof, hydrogen projects, programs and investments and timing and completion thereof, emerging decarbonization technologies and equipment, gas supply initiatives and procurement of renewable natural gas for customers, energy efficiency initiatives, investments and funding, energy usage and savings, operational sustainability measures, charitable donations and volunteer programs, political contributions, workforce trends, labor relations, diversity, equity and inclusion initiatives, compensation and benefit programs, employee training, sustainable procurement initiatives, the regulatory environment, timing or effects of future regulatory proceedings or future regulatory approvals or rate case outcomes, effects of legislation and changes in laws and regulations, including but not limited to carbon, climate, renewable natural gas and renewable hydrogen regulations, effects, extent, severity and duration of pandemics or epidemics and any resulting economic disruption therefrom, geopolitical uncertainty, and other statements that are other than statements of historical facts.

The forward-looking statements contained in this report are provided for the general information of our stakeholders and are not intended to induce any sales or purchases of securities or to be used in connection therewith for any investment purposes. Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy, geopolitical factors and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. Our actual results may differ materially from those contemplated by the forward-looking

statements, so we caution you against relying on any of these forward-looking statements. They are neither statements of historical fact nor guarantees or assurances of future performance. Important factors that could cause actual results to differ materially from those in the forward-looking statements are discussed by reference to the factors described in Part I, Item 1A "Risk Factors," and Part II, Item 7 and Item 7A "Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Quantitative and Qualitative Disclosure about Market Risk" in the Company's most recent Annual Report on Form 10-K, and in Part I, Items 2 and 3 "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Quantitative and Qualitative Disclosures About Market Risk", and Part II, Item 1A, "Risk Factors", in the Company's quarterly reports filed thereafter, which, among others, outline legal, regulatory and legislative risks, public health risks, financial macroeconomic and geopolitical risks, growth and strategic risks, operational risks, business continuity and technology risks, environmental risks and risks related to our water and renewables businesses.

All forward-looking statements made in this report and all subsequent forward-looking statements, whether written or oral and whether made by or on behalf of the Company, are expressly qualified by these cautionary statements. Any forward-looking statement speaks only as of the date on which such statement is made, and we undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by law. New factors emerge from time to time and it is not possible to predict all such factors, nor can it assess the impact of each such factor or the extent to which any factor, or combination of factors, may cause results to differ materially from those contained in any forward-looking statements.



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