UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-Q

☒ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended September 30, 2022
OR
☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from ___________ to____________

NORTHWEST NATURAL HOLDING COMPANY		NORTHWEST NATURAL GAS COMPANY	
(Exact name of registrant as specified in its charter)		(Exact name of registrant as specified in its charter)	
Commission file number	1-38681	Commission file number	1-15973
Oregon	82-4710680	Oregon	93-0256722
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)	(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
250 SW Taylor Street		250 SW Taylor Street	
Portland Oregon	97204	Portland Oregon	97204
(Address of principal executive offices)	(Zip Code)	(Address of principal executive offices)	(Zip Code)
Registrant's telephone number, including area code:	(503) 226-4211	Registrant's telephone number, including area code:	(503) 226-4211

Securities registered pursuant to Section 12(b) of the Act:

Registrant	Title of each class	Trading Symbol	Name of each exchange on which registered
NORTHWEST NATURAL HOLDING COMPANY	Common Stock	NWN	New York Stock Exchange
NORTHWEST NATURAL GAS COMPANY	None		

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

NORTHWEST NATURAL HOLDING COMPANY Yes ☒ No ☐ NORTHWEST NATURAL GAS COMPANY Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

NORTHWEST NATURAL HOLDING COMPANY Yes ☒ No ☐ NORTHWEST NATURAL GAS COMPANY Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

NORTHWEST NATURAL HOLDING COMPANY		NORTHWEST NATURAL GAS COMPANY	
Large Accelerated Filer	☒	Large Accelerated Filer	☐
Accelerated Filer	☐	Accelerated Filer	☐
Non-accelerated Filer	☐	Non-accelerated Filer	☒
Smaller Reporting Company	☐	Smaller Reporting Company	☐
Emerging Growth Company	☐	Emerging Growth Company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

NORTHWEST NATURAL HOLDING COMPANY Yes ☐ No ☒ NORTHWEST NATURAL GAS COMPANY Yes ☐ No ☒

At October 27, 2022, 35,099,161 shares of Northwest Natural Holding Company's Common Stock (the only class of Common Stock) were outstanding. All shares of Northwest Natural Gas Company's Common Stock (the only class of Common Stock) outstanding were held by Northwest Natural Holding Company.

This combined Form 10-Q is separately filed by Northwest Natural Holding Company and Northwest Natural Gas Company. Information contained in this document relating to Northwest Natural Gas Company is filed by Northwest Natural Holding Company and separately by Northwest Natural Gas Company. Northwest Natural Gas Company makes no representation as to information relating to Northwest Natural Holding Company or its subsidiaries, except as it may relate to Northwest Natural Gas Company and its subsidiaries.

NORTHWEST NATURAL GAS COMPANY
NORTHWEST NATURAL HOLDING COMPANY
For the Quarterly Period Ended September 30, 2022

TABLE OF CONTENTS

PART I. FINANCIAL INFORMATION

FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, which are subject to the safe harbors created by such Act. Forward-looking statements can be identified by words such as anticipates, assumes, may, intends, plans, projects, seeks, believes, estimates, expects, will, could, and similar references (including the negatives thereof) to future periods, although not all forward-looking statements contain these words. Examples of forward-looking statements include, but are not limited to, statements regarding the following:

•plans, projections and predictions;
•objectives, goals, visions or strategies;
•assumptions, generalizations and estimates;
•ongoing continuation of past practices or patterns;
•future events or performance;
•trends;
•risks;
•uncertainties;
•timing and cyclicality;
•economic conditions, including impacts of inflation and interest rates, and general economic uncertainty;
•earnings and dividends;
•capital expenditures and allocation;
•capital markets or access to capital;
•capital or organizational structure;
•matters related to climate change and our role in decarbonization or a low-carbon future;
•renewable natural gas, environmental attributes related thereto, and hydrogen;
•our strategy to reduce greenhouse gas emissions and the efficacy of communicating that strategy to shareholders, investors, stakeholders and communities;
•the policies and priorities of the current presidential administration and U.S. Congress;
•growth;
•customer rates;
•pandemic and related illness or quarantine, including COVID-19 and related variants and subvariants, and, economic conditions related thereto;
•labor relations and workforce succession;
•commodity costs;
•desirability and cost competitiveness of natural gas;
•gas reserves;
•operational performance and costs;
•energy policy, infrastructure and preferences;
•public policy approach and involvement;
•efficacy of derivatives and hedges;
•liquidity, financial positions, and planned securities issuances;
•valuations;
•project and program development, expansion, or investment;
•business development efforts, including new business lines such as unregulated renewable natural gas, and acquisitions and integration thereof;
•implementation and execution of our water strategy;
•pipeline capacity, demand, location, and reliability;
•adequacy of property rights and operations center development;
•technology implementation and cybersecurity practices;
•competition;
•procurement and development of gas (including renewable natural gas) and water supplies;
•estimated expenditures, supply chain and third party availability and impairment;
•costs of compliance, and our ability to include those costs in rates;
•customers bypassing our infrastructure;
•credit exposures;
•uncollectible account amounts;
•rate or regulatory outcomes, recovery or refunds, and the availability of public utility commissions to take action;
•impacts or changes of executive orders, laws, rules and regulations, or legal challenges related thereto;
•tax liabilities or refunds, including effects of tax legislation;
•levels and pricing of gas storage contracts and gas storage markets;
•outcomes, timing and effects of potential claims, litigation, regulatory actions, and other administrative matters;
•projected obligations, expectations and treatment with respect to, and the impact of new legislation on, retirement plans;
•international, federal, state, and local efforts to regulate, in a variety of ways, greenhouse gas emissions, and the effects of those efforts;
•geopolitical factors, such as the Russia/Ukraine conflict;

•availability, adequacy, and shift in mix, of gas and water supplies;
•effects of new or anticipated changes in critical accounting policies or estimates;
•approval and adequacy of regulatory deferrals;
•effects and efficacy of regulatory mechanisms; and
•environmental, regulatory, litigation and insurance costs and recoveries, and timing thereof.

Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy, 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. We therefore 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 in NW Holdings' and NW Natural's 2021 Annual Report on Form 10-K, 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 Disclosures about Market Risk*", respectively, and Part I of this report, Items 2 and 3, "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" and "*Quantitative and Qualitative Disclosures About Market Risk*", respectively.

Any forward-looking statement made in this report speaks only as of the date on which it is made. Factors or events that could cause actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. 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.

ITEM 1. CONSOLIDATED FINANCIAL STATEMENTS

NORTHWEST NATURAL HOLDING COMPANY
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (UNAUDITED)

	Three Months Ended September 30,		Nine Months Ended September 30,	
In thousands, except per share data	2022	2021	2022	2021
Operating revenues	$ 116,839	$ 101,447	$ 662,100	$ 566,310
Operating expenses:				
Cost of gas	36,105	25,266	261,413	178,669
Operations and maintenance	50,745	47,329	161,405	149,567
Environmental remediation	980	806	7,950	6,092
General taxes	9,572	9,061	30,665	29,344
Revenue taxes	4,437	3,891	26,037	22,226
Depreciation	29,026	28,438	85,565	84,679
Other operating expenses	901	1,047	2,815	2,794
Total operating expenses	131,766	115,838	575,850	473,371
Income (loss) from operations	(14,927)	(14,391)	86,250	92,939
Other income (expense), net	1,636	(2,216)	908	(8,355)
Interest expense, net	13,054	11,175	36,156	33,329
Income (loss) before income taxes	(26,345)	(27,782)	51,002	51,255
Income tax expense (benefit)	(6,758)	(7,127)	12,635	13,117
Net income (loss)	(19,587)	(20,655)	38,367	38,138
Other comprehensive income (loss):				
Amortization of non-qualified employee benefit plan liability, net of taxes of $73 and $80 for the three months ended and $215 and $240 for the nine months ended September 30, 2022 and 2021, respectively	202	234	596	676
Comprehensive income (loss)	$ (19,385)	$ (20,421)	$ 38,963	$ 38,814
Average common shares outstanding:				
Basic	34,939	30,696	33,491	30,659
Diluted	34,939	30,696	33,539	30,708
Earnings (loss) per share of common stock:				
Basic	$ (0.56)	$ (0.67)	$ 1.15	$ 1.24
Diluted	(0.56)	(0.67)	1.14	1.24

See Notes to Unaudited Consolidated Financial Statements

NORTHWEST NATURAL HOLDING COMPANY
CONSOLIDATED BALANCE SHEETS (UNAUDITED)

In thousands	September 30, 2022	September 30, 2021	December 31, 2021
Assets:			
Current assets:			
Cash and cash equivalents	$ 108,556	$ 19,502	$ 18,559
Accounts receivable	50,850	39,209	101,495
Accrued unbilled revenue	16,857	16,809	82,169
Allowance for uncollectible accounts	(2,171)	(2,702)	(2,018)
Regulatory assets	104,830	80,638	72,391
Derivative instruments	62,710	105,175	48,130
Inventories	98,725	59,997	57,262
Other current assets	41,414	39,551	59,288
Total current assets	481,771	358,179	437,276
Non-current assets:			
Property, plant, and equipment	4,207,328	3,919,096	3,997,243
Less: Accumulated depreciation	1,166,150	1,112,734	1,125,873
Total property, plant, and equipment, net	3,041,178	2,806,362	2,871,370
Regulatory assets	301,660	325,071	314,579
Derivative instruments	8,008	24,555	10,730
Other investments	96,569	76,027	89,278
Operating lease right of use asset, net	73,145	75,634	75,049
Assets under sales-type leases	135,480	140,189	138,995
Goodwill	74,732	69,789	70,570
Other non-current assets	88,169	53,419	56,757
Total non-current assets	3,818,941	3,571,046	3,627,328
Total assets	$ 4,300,712	$ 3,929,225	$ 4,064,604

See Notes to Unaudited Consolidated Financial Statements

NORTHWEST NATURAL HOLDING COMPANY
CONSOLIDATED BALANCE SHEETS (UNAUDITED)

In thousands, including share information	September 30, 2022	September 30, 2021	December 31, 2021
Liabilities and equity:			
Current liabilities:			
Short-term debt	$ 141,000	$ 399,500	$ 389,500
Current maturities of long-term debt	50,614	278	345
Accounts payable	118,274	94,897	133,486
Taxes accrued	18,080	16,558	15,520
Interest accrued	11,086	9,315	7,503
Regulatory liabilities	111,551	164,168	112,281
Derivative instruments	19,594	9,818	10,402
Operating lease liabilities	1,361	1,213	1,296
Other current liabilities	39,796	39,218	54,432
Total current liabilities	511,356	734,965	724,765
Long-term debt	1,287,006	916,026	1,044,587
Deferred credits and other non-current liabilities:			
Deferred tax liabilities	349,633	323,925	340,231
Regulatory liabilities	663,547	665,390	658,332
Pension and other postretirement benefit liabilities	160,196	202,287	166,684
Derivative instruments	18,824	268	412
Operating lease liabilities	78,469	79,789	79,468
Other non-current liabilities	110,825	115,114	114,979
Total deferred credits and other non-current liabilities	1,381,494	1,386,773	1,360,106
Commitments and contingencies (Note 16)			
Equity:			
Common stock - no par value; authorized 100,000 shares; issued and outstanding 35,098, 30,730, and 31,129 at September 30, 2022 and 2021, and December 31, 2021, respectively	786,094	573,578	590,771
Retained earnings	345,570	330,109	355,779
Accumulated other comprehensive loss	(10,808)	(12,226)	(11,404)
Total equity	1,120,856	891,461	935,146
Total liabilities and equity	$ 4,300,712	$ 3,929,225	$ 4,064,604

See Notes to Unaudited Consolidated Financial Statements

NORTHWEST NATURAL HOLDING COMPANY
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY (UNAUDITED)

In thousands, except per share amounts	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Total shareholders' equity, beginning balances	$ 1,138,779	$ 922,826	$ 935,146	$ 888,733
Common stock:				
Beginning balances	767,826	569,785	590,771	565,112
Stock-based compensation	463	527	2,695	2,973
Shares issued pursuant to equity based plans, net of shares withheld for taxes	954	1,159	1,958	3,386
Issuance of common stock, net of issuance costs	16,851	2,107	190,670	2,107
Ending balances	786,094	573,578	786,094	573,578
Retained earnings:				
Beginning balances	381,963	365,501	355,779	336,523
Net income (loss)	(19,587)	(20,655)	38,367	38,138
Dividends on common stock	(16,806)	(14,737)	(48,576)	(44,552)
Ending balances	345,570	330,109	345,570	330,109
Accumulated other comprehensive income (loss):				
Beginning balances	(11,010)	(12,460)	(11,404)	(12,902)
Other comprehensive income	202	234	596	676
Ending balances	(10,808)	(12,226)	(10,808)	(12,226)
Total shareholders' equity, ending balances	$ 1,120,856	$ 891,461	$ 1,120,856	$ 891,461
Dividends per share of common stock	$ 0.4825	$ 0.4800	$ 1.4475	$ 1.4400

See Notes to Unaudited Consolidated Financial Statements

NORTHWEST NATURAL HOLDING COMPANY
CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

In thousands	Nine Months Ended September 30, 2022	2021
Operating activities:		
Net income	$ 38,367	$ 38,138
Adjustments to reconcile net income to cash provided by operations:		
Depreciation	85,565	84,679
Regulatory amortization of gas reserves	4,527	11,606
Deferred income taxes	7,759	2,748
Qualified defined benefit pension plan expense	4,013	12,075
Contributions to qualified defined benefit pension plans	—	(9,590)
Deferred environmental expenditures, net	(14,437)	(14,952)
Environmental remediation expense	7,950	6,092
Asset optimization revenue sharing bill credits	(41,102)	(9,053)
Other	16,640	14,868
Changes in assets and liabilities:		
Receivables, net	114,755	83,826
Inventories	(41,463)	(17,307)
Income and other taxes	19,447	19,620
Accounts payable	(30,010)	(18,057)
Deferred gas costs	(1,785)	(33,379)
Asset optimization revenue sharing	17,629	41,407
Decoupling mechanism	7,124	(9,172)
Cloud-based software	(17,332)	(6,851)
Other, net	(11,686)	(14,974)
Cash provided by operating activities	165,961	181,724
Investing activities:		
Capital expenditures	(251,842)	(212,376)
Acquisitions, net of cash acquired	(2,352)	(375)
Proceeds from the sale of assets	539	2,712
Proceeds from sale of equity method investment	—	7,000
Other	(3,349)	(482)
Cash used in investing activities	(257,004)	(203,521)
Financing activities:		
Proceeds from common stock issued, net	190,929	2,107
Long-term debt issued	290,000	55,000
Long-term debt retired	—	(95,000)
Proceeds from term loan due within one year	—	100,000
Repayment of commercial paper, maturities greater than three months	—	(195,025)
Changes in other short-term debt, net	(248,500)	190,000
Cash dividend payments on common stock	(46,434)	(41,827)
Other	(1,802)	(1,240)
Cash provided by financing activities	184,193	14,015
Increase (decrease) in cash, cash equivalents and restricted cash	93,150	(7,782)
Cash, cash equivalents and restricted cash, beginning of period	27,120	35,454
Cash, cash equivalents and restricted cash, end of period	$ 120,270	$ 27,672
Supplemental disclosure of cash flow information:		
Interest paid, net of capitalization	$ 31,774	$ 30,910
Income taxes paid, net of refunds	2,106	6,980

See Notes to Unaudited Consolidated Financial Statements

NORTHWEST NATURAL GAS COMPANY
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (UNAUDITED)

	Three Months Ended September 30,		Nine Months Ended September 30,	
In thousands	2022	2021	2022	2021
Operating revenues	$ 110,426	$ 96,036	$ 647,301	$ 552,965
Operating expenses:				
Cost of gas	36,164	25,322	261,584	178,837
Operations and maintenance	45,858	43,768	148,614	137,894
Environmental remediation	980	806	7,950	6,092
General taxes	9,467	8,999	30,328	29,041
Revenue taxes	4,375	3,838	25,907	22,143
Depreciation	28,201	27,719	83,166	82,418
Other operating expenses	675	669	2,370	2,368
Total operating expenses	125,720	111,121	559,919	458,793
Income (loss) from operations	(15,294)	(15,085)	87,382	94,172
Other income (expense), net	1,161	(2,295)	197	(8,526)
Interest expense, net	11,128	10,850	32,558	32,336
Income (loss) before income taxes	(25,261)	(28,230)	55,021	53,310
Income tax expense (benefit)	(6,455)	(7,212)	13,678	13,628
Net income (loss)	(18,806)	(21,018)	41,343	39,682
Other comprehensive income (loss):				
Amortization of non-qualified employee benefit plan liability, net of taxes of $73 and $80 for the three months ended and $215 and $240 for the nine months ended September 30, 2022 and 2021, respectively	202	234	596	676
Comprehensive income (loss)	$ (18,604)	$ (20,784)	$ 41,939	$ 40,358

See Notes to Unaudited Consolidated Financial Statements

NORTHWEST NATURAL GAS COMPANY
CONSOLIDATED BALANCE SHEETS (UNAUDITED)

In thousands	September 30, 2022	September 30, 2021	December 31, 2021
Assets:			
Current assets:			
Cash and cash equivalents	$ 11,386	$ 9,697	$ 12,271
Accounts receivable	48,082	37,328	99,780
Accrued unbilled revenue	16,649	16,702	82,028
Receivables from affiliates	221	628	261
Allowance for uncollectible accounts	(2,114)	(2,658)	(1,962)
Regulatory assets	104,830	80,638	72,391
Derivative instruments	62,710	105,175	48,130
Inventories	97,633	59,641	56,752
Other current assets	32,605	29,075	47,378
Total current assets	372,002	336,226	417,029
Non-current assets:			
Property, plant, and equipment	4,124,488	3,857,652	3,931,640
Less: Accumulated depreciation	1,157,400	1,106,901	1,119,361
Total property, plant, and equipment, net	2,967,088	2,750,751	2,812,279
Regulatory assets	301,596	325,031	314,539
Derivative instruments	8,008	24,555	10,730
Other investments	80,871	75,991	74,786
Operating lease right of use asset, net	73,046	75,565	74,987
Assets under sales-type leases	135,480	140,189	138,995
Other non-current assets	86,661	52,653	55,027
Total non-current assets	3,652,750	3,444,735	3,481,343
Total assets	$ 4,024,752	$ 3,780,961	$ 3,898,372

See Notes to Unaudited Consolidated Financial Statements

NORTHWEST NATURAL GAS COMPANY
CONSOLIDATED BALANCE SHEETS (UNAUDITED)

In thousands	September 30, 2022	September 30, 2021	December 31, 2021
Liabilities and equity:			
Current liabilities:			
Short-term debt	$ 53,000	$ 370,500	$ 245,500
Current maturities of long-term debt	49,938	—	—
Accounts payable	115,066	91,947	131,475
Payables to affiliates	1,789	2,568	1,248
Taxes accrued	17,914	16,472	15,476
Interest accrued	10,533	9,258	7,296
Regulatory liabilities	111,526	164,168	112,281
Derivative instruments	19,594	9,818	10,402
Operating lease liabilities	1,298	1,184	1,273
Other current liabilities	38,998	38,642	53,591
Total current liabilities	419,656	704,557	578,542
Long-term debt	1,076,533	857,760	986,495
Deferred credits and other non-current liabilities:			
Deferred tax liabilities	346,423	321,636	337,717
Regulatory liabilities	662,565	664,521	657,350
Pension and other postretirement benefit liabilities	160,196	202,287	166,684
Derivative instruments	18,824	268	412
Operating lease liabilities	78,436	79,752	79,431
Other non-current liabilities	109,304	114,438	113,934
Total deferred credits and other non-current liabilities	1,375,748	1,382,902	1,355,528
Commitments and contingencies (Note 16)			
Equity:			
Common stock	614,903	321,641	435,515
Retained earnings	548,720	526,327	553,696
Accumulated other comprehensive loss	(10,808)	(12,226)	(11,404)
Total equity	1,152,815	835,742	977,807
Total liabilities and equity	$ 4,024,752	$ 3,780,961	$ 3,898,372

See Notes to Unaudited Consolidated Financial Statements

NORTHWEST NATURAL GAS COMPANY
CONSOLIDATED STATEMENTS OF SHAREHOLDER'S EQUITY (UNAUDITED)

In thousands	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Total shareholder's equity, beginning balances	$ 1,173,676	$ 868,391	$ 977,807	$ 835,184
Common stock:				
Beginning balances	601,032	319,506	435,515	319,506
Capital contributions from parent	13,871	2,135	179,388	2,135
Ending balances	614,903	321,641	614,903	321,641
Retained earnings:				
Beginning balances	583,654	561,345	553,696	528,580
Net income (loss)	(18,806)	(21,018)	41,343	39,682
Dividends on common stock	(16,128)	(14,000)	(46,319)	(41,935)
Ending balances	548,720	526,327	548,720	526,327
Accumulated other comprehensive income (loss):				
Beginning balances	(11,010)	(12,460)	(11,404)	(12,902)
Other comprehensive income	202	234	596	676
Ending balances	(10,808)	(12,226)	(10,808)	(12,226)
Total shareholder's equity, ending balances	$ 1,152,815	$ 835,742	$ 1,152,815	$ 835,742

See Notes to Unaudited Consolidated Financial Statements

NORTHWEST NATURAL GAS COMPANY
CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

In thousands	Nine Months Ended September 30, 2022	2021
Operating activities:		
Net income	$ 41,343	$ 39,682
Adjustments to reconcile net income to cash provided by operations:		
Depreciation	83,166	82,418
Regulatory amortization of gas reserves	4,527	11,606
Deferred income taxes	7,013	1,687
Qualified defined benefit pension plan expense	4,013	12,075
Contributions to qualified defined benefit pension plans	—	(9,590)
Deferred environmental expenditures, net	(14,437)	(14,952)
Environmental remediation expense	7,950	6,092
Asset optimization revenue sharing bill credits	(41,102)	(9,053)
Other	16,665	13,728
Changes in assets and liabilities:		
Receivables, net	115,915	84,726
Inventories	(40,881)	(17,317)
Income and other taxes	17,412	5,175
Accounts payable	(32,023)	(22,929)
Deferred gas costs	(1,785)	(33,379)
Asset optimization revenue sharing	17,629	41,407
Decoupling mechanism	7,124	(9,172)
Cloud-based software	(17,332)	(6,851)
Other, net	(12,604)	(13,525)
Cash provided by operating activities	162,593	161,828
Investing activities:		
Capital expenditures	(236,467)	(199,399)
Proceeds from the sale of assets	539	2,712
Other	(3,349)	(482)
Cash used in investing activities	(239,277)	(197,169)
Financing activities:		
Cash contributions received from parent	179,388	2,135
Long-term debt issued	140,000	—
Long-term debt retired	—	(60,000)
Proceeds from term loan due within one year	—	100,000
Repayment of commercial paper, maturities greater than three months	—	(195,025)
Changes in other short-term debt, net	(192,500)	234,000
Cash dividend payments on common stock	(46,319)	(41,935)
Other	(1,617)	(1,706)
Cash provided by financing activities	78,952	37,469
Increase in cash, cash equivalents and restricted cash	2,268	2,128
Cash, cash equivalents and restricted cash, beginning of period	20,832	15,739
Cash, cash equivalents and restricted cash, end of period	$ 23,100	$ 17,867
Supplemental disclosure of cash flow information:		
Interest paid, net of capitalization	$ 28,326	$ 29,920
Income taxes paid, net of refunds	5,990	23,035

See Notes to Unaudited Consolidated Financial Statements

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

1. ORGANIZATION AND PRINCIPLES OF CONSOLIDATION

The accompanying consolidated financial statements represent the respective, consolidated financial results of Northwest Natural Holding Company (NW Holdings) and Northwest Natural Gas Company (NW Natural) and all respective companies that each registrant directly or indirectly controls, either through majority ownership or otherwise. This is a combined report of NW Holdings and NW Natural, which includes separate consolidated financial statements for each registrant.

NW Natural's regulated natural gas distribution activities are reported in the natural gas distribution (NGD) segment. The NGD segment is NW Natural's core operating business and serves residential, commercial, and industrial customers in Oregon and southwest Washington. The NGD segment is the only reportable segment for NW Holdings and NW Natural. All other activities, water businesses, and other investments are aggregated and reported as other at their respective registrant.

NW Holdings and NW Natural consolidate all entities in which they have a controlling financial interest. Investments in corporate joint ventures and partnerships that NW Holdings does not directly or indirectly control, and for which it is not the primary beneficiary, include NNG Financial's investment in Kelso-Beaver Pipeline and NWN Water's investment in Avion Water Company, Inc., which are accounted for under the equity method. NW Natural RNG Holding Company, LLC holds an investment in Lexington Renewable Energy, LLC, which is also accounted for under the equity method. See Note 13 for activity related to equity method investments. NW Holdings and its direct and indirect subsidiaries are collectively referred to herein as NW Holdings, and NW Natural and its direct and indirect subsidiaries are collectively referred to herein as NW Natural. The consolidated financial statements of NW Holdings and NW Natural are presented after elimination of all intercompany balances and transactions.

Information presented in these interim consolidated financial statements is unaudited, but includes all material adjustments management considers necessary for a fair statement of the results for each period reported including normal recurring accruals. These consolidated financial statements should be read in conjunction with the audited consolidated financial statements and related notes included in NW Holdings' and NW Natural's combined 2021 Annual Report on Form 10-K (2021 Form 10-K). A significant part of NW Holdings' and NW Natural's business is of a seasonal nature; therefore, NW Holdings and NW Natural results of operations for interim periods are not necessarily indicative of full year results. Seasonality affects the comparability of the results of other operations across quarters but not across years.

Notes to the consolidated financial statements reflect the activity for both NW Holdings and NW Natural for all periods presented, unless otherwise noted. Certain reclassifications have been made to conform prior period information to the current presentation. The reclassifications did not have a material effect on our consolidated financial statements.

2. SIGNIFICANT ACCOUNTING POLICIES

Significant accounting policies are described in Note 2 of the 2021 Form 10-K. There were no material changes to those accounting policies during the nine months ended September 30, 2022 other than those set forth in this Note 2. The following are current updates to certain critical accounting policy estimates and new accounting standards.

Industry Regulation

In applying regulatory accounting principles, NW Holdings and NW Natural capitalize or defer certain costs and revenues as regulatory assets and liabilities pursuant to orders of the Oregon Public Utilities Commission (OPUC), Washington Utilities and Transportation Commission (WUTC), Idaho Public Utilities Commission (IPUC) or Public Utility Commission of Texas (PUCT), as applicable, which provide for the recovery of revenues or expenses from, or refunds to, utility customers in future periods, including a return or a carrying charge in certain cases.

Amounts deferred as regulatory assets and liabilities for NW Holdings and NW Natural were as follows:

	Regulatory Assets		
	September 30,		December 31,
In thousands	2022	2021	2021
NW Natural:			
Current:			
Unrealized loss on derivatives(1)	$ 19,594	$ 9,818	$ 10,402
Gas costs	52,115	39,622	35,641
Environmental costs(2)	9,461	7,068	6,694
Decoupling(3)	114	1,628	969
Pension balancing(4)	7,131	7,131	7,131
Income taxes	2,399	2,939	2,568
Other(5)	14,016	12,432	8,986
Total current	$ 104,830	$ 80,638	$ 72,391
Non-current:			
Unrealized loss on derivatives(1)	$ 18,824	$ 268	$ 412
Pension balancing(4)	34,928	40,176	38,302
Income taxes	11,168	13,912	12,609
Pension and other postretirement benefit liabilities	107,722	155,077	116,440
Environmental costs(2)	82,667	83,969	94,636
Gas costs	3,369	2,858	15,477
Decoupling(3)	—	118	—
Other(5)	42,918	28,653	36,663
Total non-current	$ 301,596	$ 325,031	$ 314,539
Other (NW Holdings)	64	40	40
Total non-current - NW Holdings	$ 301,660	$ 325,071	$ 314,579

	Regulatory Liabilities		
	September 30,		December 31,
In thousands	2022	2021	2021
NW Natural:			
Current:			
Gas costs	$ 944	$ 847	$ 70
Unrealized gain on derivatives(1)	62,882	105,175	48,130
Decoupling(3)	13,272	4,484	4,475
Income taxes	7,318	8,217	8,192
Asset optimization revenue sharing	23,461	43,883	45,124
Other(5)	3,649	1,562	6,290
Total current - NW Natural	$ 111,526	$ 164,168	$ 112,281
Other (NW Holdings)	25	—	—
Total current - NW Holdings	$ 111,551	$ 164,168	$ 112,281
Non-current:			
Gas costs	$ 50	$ —	$ 250
Unrealized gain on derivatives(1)	8,008	24,555	10,730
Decoupling(3)	884	214	3,412
Income taxes(6)	179,319	186,429	181,404
Accrued asset removal costs(7)	460,666	440,410	445,952
Asset optimization revenue sharing	—	—	1,810
Other(5)	13,638	12,913	13,792
Total non-current - NW Natural	$ 662,565	$ 664,521	$ 657,350
Other (NW Holdings)	982	869	982
Total non-current - NW Holdings	$ 663,547	$ 665,390	$ 658,332

(1)Unrealized gains or losses on derivatives are non-cash items and therefore do not earn a rate of return or a carrying charge. These amounts are recoverable through NGD rates as part of the annual Purchased Gas Adjustment (PGA) mechanism when realized at settlement.

(2)Refer to the Environmental Cost Deferral and Recovery table in Note 16 for a description of environmental costs.

(3)This deferral represents the margin adjustment resulting from differences between actual and expected volumes.
(4)Balance represents deferred net periodic benefit costs as approved by the OPUC.
(5)Balances consist of deferrals and amortizations under approved regulatory mechanisms and typically earn a rate of return or carrying charge.
(6)Balance represents excess deferred income tax benefits subject to regulatory flow-through.
(7)Estimated costs of removal on certain regulated properties are collected through rates.

We believe all costs incurred and deferred at September 30, 2022 are prudent. All regulatory assets and liabilities are reviewed annually for recoverability, or more often if circumstances warrant. If we should determine that all or a portion of these regulatory assets or liabilities no longer meet the criteria for continued application of regulatory accounting, then NW Holdings and NW Natural would be required to write-off the net unrecoverable balances in the period such determination is made.

Supplemental Cash Flow Information
Restricted cash is primarily comprised of funds from public purpose charges for programs that assist low-income customers with bill payments or energy efficiency.

The following table provides a reconciliation of the cash, cash equivalents and restricted cash balances at NW Holdings as of September 30, 2022 and 2021 and December 31, 2021:

In thousands	September 30, 2022	September 30, 2021	December 31, 2021
Cash and cash equivalents	$ 108,556	$ 19,502	$ 18,559
Restricted cash included in other current assets	11,714	8,170	8,561
Cash, cash equivalents and restricted cash	$ 120,270	$ 27,672	$ 27,120

The following table provides a reconciliation of the cash, cash equivalents and restricted cash balances at NW Natural as of September 30, 2022 and 2021 and December 31, 2021:

In thousands	September 30, 2022	September 30, 2021	December 31, 2021
Cash and cash equivalents	$ 11,386	$ 9,697	$ 12,271
Restricted cash included in other current assets	11,714	8,170	8,561
Cash, cash equivalents and restricted cash	$ 23,100	$ 17,867	$ 20,832

Accounts Receivable and Allowance for Uncollectible Accounts
Accounts receivable consist primarily of amounts due for natural gas sales and transportation services to NGD customers, plus amounts due for gas storage services. NW Holdings and NW Natural establish allowances for uncollectible accounts (allowance) for trade receivables, including accrued unbilled revenue, based on the aging of receivables, collection experience of past due account balances including payment plans, and historical trends of write-offs as a percent of revenues. A specific allowance is established and recorded for large individual customer receivables when amounts are identified as unlikely to be partially or fully recovered. Inactive accounts are written-off against the allowance after they are 120 days past due or when deemed uncollectible. Differences between the estimated allowance and actual write-offs will occur based on a number of factors, including changes in economic conditions, customer creditworthiness, and natural gas prices. The allowance for uncollectible accounts is adjusted quarterly, as necessary, based on information currently available.

Allowance for Trade Receivables
The payment term of our NGD receivables is generally 15 days. For these short-term receivables, it is not expected that forecasted economic conditions would significantly affect the loss estimates under stable economic conditions. For extreme situations like a financial crisis, natural disaster, and the economic slowdown caused by the COVID-19 pandemic, we enhanced our review and analysis.

For the third quarter 2022 residential and commercial uncollectible provision, we primarily followed our standard methodology, which includes assessing historical write-off trends and current information on delinquent accounts. Beginning October 1, 2022, new collection rules from the OPUC applied to residential and commercial customers. This included enhanced protections for low-income customers, a return to pre-pandemic time payment arrangements terms, revised disconnection rules during the heating season, and other items. As a result of these Oregon rule changes and our recent collection process experience, we augmented our provision review in the third quarter for Oregon accounts in the following categories: closed or inactive accounts aged less than 120 days, accounts on 24-month payment plans, and all other open accounts not on payment plans. For industrial accounts, we continue to assess the provision on an account-by-account basis with specific reserves taken as necessary. We'll continue to closely monitor and evaluate our accounts receivable and the provision for uncollectible accounts.

The following table presents the activity related to the NW Holdings provision for uncollectible accounts by pool, substantially all of which is related to NW Natural's accounts receivable:

	As of December 31, 2021	Nine Months Ended September 30, 2022		As of September 30, 2022
In thousands	Beginning Balance	Provision recorded, net of adjustments	Write-offs recognized, net of recoveries	Ending Balance
Allowance for uncollectible accounts:				
Residential	$ 1,460	$ 896	$ (871)	$ 1,485
Commercial	178	375	(272)	281
Industrial	67	173	(62)	178
Accrued unbilled and other	313	84	(170)	227
Total	$ 2,018	$ 1,528	$ (1,375)	$ 2,171

Allowance for Net Investments in Sales-Type Leases

NW Natural currently holds two net investments in sales-type leases, with substantially all of the net investment balance related to the North Mist natural gas storage agreement with Portland General Electric (PGE) which is billed under an OPUC-approved rate schedule. See Note 7 for more information on the North Mist lease. Due to the nature of this service, PGE may recover the costs of the lease through general rate cases. Therefore, we expect the risk of loss due to the credit of this lessee to be remote. As such, no allowance for uncollectibility was recorded for our sales-type lease receivables. NW Natural will continue monitoring the credit health of the lessees and the overall economic environment, including the economic factors closely tied to the financial health of our current and future lessees.

COVID-19 Impact

During 2020, our regulated utilities received approval in their respective jurisdictions to defer certain financial impacts associated with COVID-19 such as bad debt expense, financing costs to secure liquidity, lost revenues related to late fees and reconnection fees, and other COVID-19 related costs, net of offsetting direct expense reductions associated with COVID-19. As of September 30, 2022 and 2021, we had a regulatory asset of approximately $15.1 million and $7.4 million, respectively, for incurred costs associated with COVID-19 that we believe are recoverable. As part of the 2022 Oregon general rate case, we received approval from the OPUC to recover the 2020 and 2021 COVID-19 deferral totaling $10.9 million over two years starting November 1, 2022.

Cloud Computing Arrangements (CCA)

Implementation costs associated with its CCA are capitalized consistent with costs capitalized for internal-use software. Capitalized CCA implementation costs are included in other assets in the consolidated balance sheets. The CCA implementation costs are amortized over the term of the related hosting agreement, including renewal periods that are reasonably certain to be exercised. Amortization expense of CCA implementation costs are recorded as operations and maintenance expenses in the consolidated statements of comprehensive income. The CCA implementation costs are included within operating activities in the consolidated statements of cash flows.

New Accounting Standards

NW Natural and NW Holdings consider the applicability and impact of all accounting standards updates (ASUs) issued by the Financial Accounting Standards Board (FASB). ASUs not listed below were assessed and determined to be either not applicable or are expected to have minimal impact on consolidated financial position or results of operations.

Recently Adopted Accounting Pronouncements

LEASES. In July 2021, the FASB issued ASU 2021-05, "Leases (Topic 842), Lessors - Certain Leases with Variable Lease Payments." The purpose of the amendment is to require lessors to account for certain lease transactions that contain variable lease payments as operating leases. The amendments in this ASU are intended to eliminate the recognition of any day-one loss associated with certain sales-type and direct-financing lease transactions. The changes do not impact lessee accounting. The new guidance was effective on January 1, 2022 and adopted using a prospective approach. The adoption did not materially affect the financial statements and disclosures of NW Holdings or NW Natural.

3. EARNINGS PER SHARE

Basic earnings or loss per share are computed using NW Holdings' net income or loss and the weighted average number of common shares outstanding for each period presented. Diluted earnings per share are computed in the same manner, except using the weighted average number of common shares outstanding plus the effects of the assumed exercise of stock options and the payment of estimated stock awards from other stock-based compensation plans that are outstanding at the end of each period presented. Anti-dilutive stock awards are excluded from the calculation of diluted earnings or loss per common share.

NW Holdings' diluted earnings or loss per share are calculated as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
In thousands, except per share data	2022	2021	2022	2021
Net income (loss)	(19,587)	(20,655)	38,367	38,138
Average common shares outstanding - basic	34,939	30,696	33,491	30,659
Additional shares for stock-based compensation plans (See Note 8)	—	—	48	49
Average common shares outstanding - diluted	34,939	30,696	33,539	30,708
Earnings (loss) per share of common stock:				
Basic	$ (0.56)	$ (0.67)	$ 1.15	$ 1.24
Diluted	$ (0.56)	$ (0.67)	$ 1.14	$ 1.24
Additional information:				
Anti-dilutive shares	85	51	—	6

4. SEGMENT INFORMATION

We primarily operate in one reportable business segment, which is NW Natural's local gas distribution business and is referred to as the NGD segment. NW Natural and NW Holdings also have investments and business activities not specifically related to the NGD segment, which are aggregated and reported as other and described below for each entity.

Natural Gas Distribution
NW Natural's local gas distribution segment is a regulated utility principally engaged in the purchase, sale, and delivery of natural gas and related services to customers in Oregon and southwest Washington. In addition to NW Natural's local gas distribution business, the NGD segment also includes the portion of the Mist underground storage facility used to serve NGD customers, the North Mist gas storage expansion in Oregon, NWN Gas Reserves, which is a wholly-owned subsidiary of Energy Corp, and NW Natural RNG Holding Company, LLC, a holding company established to invest in the development and procurement of regulated renewable natural gas for NW Natural.

NW Natural
NW Natural's activities in Other include Interstate Storage Services and third-party asset management services for the Mist facility in Oregon, appliance retail center operations, and corporate operating and non-operating revenues and expenses that cannot be allocated to NGD operations.

Earnings from Interstate Storage Services assets are primarily related to firm storage capacity revenues. Earnings from the Mist facility also include revenue, net of amounts shared with NGD customers, from management of NGD assets at Mist and upstream pipeline capacity when not needed to serve NGD customers. Under the Oregon sharing mechanism, NW Natural retains 80% of the pre-tax income from these services when the costs of the capacity were not included in NGD rates, or 10% of the pre-tax income when the costs have been included in these rates. The remaining 20% and 90%, respectively, are recorded to a deferred regulatory account for crediting back to NGD customers.

NW Holdings
NW Holdings' activities in Other include all remaining activities not associated with NW Natural, specifically: NWN Water, which consolidates the water and wastewater utility operations and is pursuing other investments in the water sector through itself and wholly-owned subsidiaries; NWN Water's equity investment in Avion Water Company, Inc.; NWN Gas Storage, a wholly-owned subsidiary of NWN Energy; other pipeline assets in NNG Financial; and NW Natural Renewables Holdings, LLC and its non-regulated renewable natural gas activities. Other also includes corporate revenues and expenses that cannot be allocated to other operations, including certain business development activities.

Segment Information Summary

Inter-segment transactions were immaterial for the periods presented. The following table presents summary financial information concerning the reportable segment and other.

	Three Months Ended September 30,				
In thousands	NGD	Other (NW Natural)	NW Natural	Other (NW Holdings)	NW Holdings
2022					
Operating revenues	$ 103,295	$ 7,131	$ 110,426	$ 6,413	$ 116,839
Depreciation	27,937	264	28,201	825	29,026
Income (loss) from operations	(20,910)	5,616	(15,294)	367	(14,927)
Net income (loss)	(23,016)	4,210	(18,806)	(781)	(19,587)
Capital expenditures	79,847	431	80,278	3,868	84,146
2021					
Operating revenues	$ 91,042	$ 4,994	$ 96,036	$ 5,411	$ 101,447
Depreciation	27,462	257	27,719	719	28,438
Income (loss) from operations	(18,288)	3,203	(15,085)	694	(14,391)
Net income (loss)	(23,297)	2,279	(21,018)	363	(20,655)
Capital expenditures	72,822	1,410	74,232	8,036	82,268

	Nine Months Ended September 30,				
In thousands	NGD	Other (NW Natural)	NW Natural	Other (NW Holdings)	NW Holdings
2022					
Operating revenues	$ 629,327	$ 17,974	$ 647,301	$ 14,799	$ 662,100
Depreciation	82,372	794	83,166	2,399	85,565
Income (loss) from operations	75,328	12,054	87,382	(1,132)	86,250
Net income (loss)	32,531	8,812	41,343	(2,976)	38,367
Capital expenditures	235,249	1,218	236,467	15,375	251,842
Total assets at September 30, 2022	3,968,040	56,712	4,024,752	275,960	4,300,712
2021					
Operating revenues	$ 531,994	$ 20,971	$ 552,965	$ 13,345	$ 566,310
Depreciation	81,648	770	82,418	2,261	84,679
Income (loss) from operations	79,530	14,642	94,172	(1,233)	92,939
Net income (loss)	29,247	10,435	39,682	(1,544)	38,138
Capital expenditures	197,190	2,209	199,399	12,977	212,376
Total assets at September 30, 2021	3,730,595	50,366	3,780,961	148,264	3,929,225
Total assets at December 31, 2021	3,846,112	52,260	3,898,372	166,232	4,064,604

Natural Gas Distribution Margin

NGD margin is the primary financial measure used by the Chief Operating Decision Maker (CODM), consisting of NGD operating revenues, reduced by the associated cost of gas, environmental remediation expense, and revenue taxes. The cost of gas purchased for NGD customers is generally a pass-through cost in the amount of revenues billed to regulated NGD customers. Environmental remediation expense represents collections received from customers through environmental recovery mechanisms in Oregon and Washington as well as adjustments for the Oregon environmental earnings test when applicable. This is offset by environmental remediation expense presented in operating expenses. Revenue taxes are collected from NGD customers and remitted to taxing authorities. The collections from customers are offset by the expense recognition of the obligation to the taxing authority. By subtracting cost of gas, environmental remediation expense, and revenue taxes from NGD operating revenues, NGD margin provides a key metric used by the CODM in assessing the performance of the NGD segment.

The following table presents additional segment information concerning NGD margin:

	Three Months Ended September 30,		Nine Months Ended September 30,	
In thousands	2022	2021	2022	2021
NGD margin calculation:				
NGD distribution revenues	$ 98,391	$ 86,271	$ 614,605	$ 517,673
Other regulated services	4,904	4,771	14,722	14,321
Total NGD operating revenues	103,295	91,042	629,327	531,994
Less: NGD cost of gas	36,258	25,322	261,678	178,837
Environmental remediation	975	806	7,945	6,092
Revenue taxes	4,375	3,838	25,907	22,143
NGD margin	$ 61,687	$ 61,076	$ 333,797	$ 324,922

5. *COMMON STOCK*

In August 2021, NW Holdings initiated an at-the-market (ATM) equity program by entering into an equity distribution agreement under which NW Holdings may issue and sell from time to time shares of common stock, no par value, having an aggregate gross sales price of up to $200 million. NW Holdings is under no obligation to offer and sell common stock under the ATM equity program, which expires in August 2024. Any shares of common stock offered under the ATM equity program are registered on NW Holdings’ universal shelf registration statement filed with the SEC. During the three months ended September 30, 2022, NW Holdings issued and sold 327,221 shares of common stock pursuant to the ATM equity program resulting in cash proceeds of $16.7 million, net of fees and commissions paid to agents of $0.3 million. During the nine months ended September 30, 2022, NW Holdings issued and sold 1,005,322 shares of common stock pursuant to the ATM equity program resulting in cash proceeds of $51.9 million, net of fees and commissions paid to agents of $1.0 million. As of September 30, 2022, NW Holdings had $129.2 million of equity available for issuance under the program. The ATM equity program was initiated to raise funds for general corporate purposes, including equity contributions to NW Holdings’ subsidiaries, NW Natural and NW Natural Water. Contributions to NW Natural and NW Natural Water will be used for general corporate purposes.

On April 1, 2022, NW Holdings issued and sold 2,875,000 shares of its common stock pursuant to a registration statement on Form S-3 and related prospectus supplement. NW Holdings received net offering proceeds, after deducting the underwriter's discounts and commissions and expenses payable by NW Holdings, of approximately $138.6 million. The proceeds were used for general corporate purposes, including repayment of its short-term indebtedness and/or making equity contributions to NW Holdings' subsidiaries, NW Natural, NW Natural Water and NW Natural Renewables. Contributions to NW Natural, NW Natural Water and NW Natural Renewables are to be used for general corporate purposes. Of the contributions received by NW Natural, $130.0 million was used to repay its short-term indebtedness.

6. REVENUE

The following tables present disaggregated revenue:

	Three Months Ended September 30,									
In thousands		NGD		Other (NW Natural)		NW Natural		Other (NW Holdings)		NW Holdings
2022										
Natural gas sales	$	95,784	$	—	$	95,784	$	—	$	95,784
Gas storage revenue, net		—		2,882		2,882		—		2,882
Asset management revenue, net		—		3,047		3,047		—		3,047
Appliance retail center revenue		—		1,202		1,202		—		1,202
Other revenue		624		—		624		6,413		7,037
Revenue from contracts with customers		96,408		7,131		103,539		6,413		109,952
Alternative revenue		2,589		—		2,589		—		2,589
Leasing revenue		4,298		—		4,298		—		4,298
Total operating revenues	$	103,295	$	7,131	$	110,426	$	6,413	$	116,839
2021										
Natural gas sales	$	83,947	$	—	$	83,947	$	—	$	83,947
Gas storage revenue, net		—		2,794		2,794		—		2,794
Asset management revenue, net		—		1,012		1,012		—		1,012
Appliance retail center revenue		—		1,188		1,188		—		1,188
Other revenue		403		—		403		5,411		5,814
Revenue from contracts with customers		84,350		4,994		89,344		5,411		94,755
Alternative revenue		2,307		—		2,307		—		2,307
Leasing revenue		4,385		—		4,385		—		4,385
Total operating revenues	$	91,042	$	4,994	$	96,036	$	5,411	$	101,447

	Nine Months Ended September 30,									
In thousands		NGD		Other (NW Natural)		NW Natural		Other (NW Holdings)		NW Holdings
2022										
Natural gas sales	$	623,121	$	—	$	623,121	$	—	$	623,121
Gas storage revenue, net		—		8,678		8,678		—		8,678
Asset management revenue, net		—		4,941		4,941		—		4,941
Appliance retail center revenue		—		4,355		4,355		—		4,355
Other revenue		1,882		—		1,882		14,799		16,681
Revenue from contracts with customers		625,003		17,974		642,977		14,799		657,776
Alternative revenue		(8,571)		—		(8,571)		—		(8,571)
Leasing revenue		12,895		—		12,895		—		12,895
Total operating revenues	$	629,327	$	17,974	$	647,301	$	14,799	$	662,100
2021										
Natural gas sales	$	503,769	$	—	$	503,769	$	—	$	503,769
Gas storage revenue, net		—		8,094		8,094		—		8,094
Asset management revenue, net		—		8,757		8,757		—		8,757
Appliance retail center revenue		—		4,120		4,120		—		4,120
Other revenue		1,217		—		1,217		13,345		14,562
Revenue from contracts with customers		504,986		20,971		525,957		13,345		539,302
Alternative revenue		13,843		—		13,843		—		13,843
Leasing revenue		13,165		—		13,165		—		13,165
Total operating revenues	$	531,994	$	20,971	$	552,965	$	13,345	$	566,310

NW Natural's revenue represents substantially all of NW Holdings' revenue and is recognized for both registrants when the obligation to customers is satisfied and in the amount expected to be received in exchange for transferring goods or providing services. Revenue from contracts with customers contains one performance obligation that is generally satisfied over time, using the output method based on time elapsed, due to the continuous nature of the service provided. The transaction price is determined by a set price agreed upon in the contract or dependent on regulatory tariffs. Customer accounts are settled on a monthly basis or paid at time of sale and based on historical experience. It is probable that we will collect substantially all of the consideration to which we are entitled. We evaluated the probability of collection in accordance with the current expected credit losses standard.

NW Holdings and NW Natural do not have any material contract assets, as net accounts receivable and accrued unbilled revenue balances are unconditional and only involve the passage of time until such balances are billed and collected. NW Holdings and NW Natural do not have any material contract liabilities.

Revenue taxes are included in operating revenues with an equal and offsetting expense recognized in operating expenses in the consolidated statements of comprehensive income. Revenue-based taxes are primarily franchise taxes, which are collected from NGD customers and remitted to taxing authorities.

Natural Gas Distribution
Natural Gas Sales
NW Natural's primary source of revenue is providing natural gas to customers in the NGD service territory, which includes residential, commercial, industrial and transportation customers. NGD revenue is generally recognized over time upon delivery of the gas commodity or service to the customer, and the amount of consideration received and recognized as revenue is dependent on the Oregon and Washington tariffs. Customer accounts are to be paid in full each month, and there is no right of return or warranty for services provided. Revenues include firm and interruptible sales and transportation services, franchise taxes recovered from the customer, late payment fees, service fees, and accruals for gas delivered but not yet billed (accrued unbilled revenue). The accrued unbilled revenue balance is based on estimates of deliveries during the period from the last meter reading and management judgment is required for a number of factors used in this calculation, including customer use and weather factors.

We applied the significant financing practical expedient and have not adjusted the consideration NW Natural expects to receive from NGD customers for the effects of a significant financing component as all payment arrangements are settled annually. Due to the election of the right to invoice practical expedient, we do not disclose the value of unsatisfied performance obligations.

Alternative Revenue
Weather normalization (WARM) and decoupling mechanisms are considered to be alternative revenue programs. Alternative revenue programs are considered to be contracts between NW Natural and its regulator and are excluded from revenue from contracts with customers.

Leasing Revenue
Leasing revenue primarily consists of revenues from NW Natural's North Mist Storage contract with Portland General Electric (PGE) in support of PGE's gas-fired electric power generation facilities under an initial 30-year contract with options to extend, totaling up to an additional 50 years upon mutual agreement of the parties. The facility is accounted for as a sales-type lease with regulatory accounting deferral treatment. The investment is included in rate base under an established cost-of-service tariff schedule, with revenues recognized according to the tariff schedule and as such, profit upon commencement was deferred and will be amortized over the lease term. Leasing revenue also contains rental revenue from small leases of property owned by NW Natural to third parties. The majority of these transactions are accounted for as operating leases and the revenue is recognized over the term of the lease agreement. Lease revenue is excluded from revenue from contracts with customers. See Note 7 for additional information.

NW Natural Other
Gas Storage Revenue
NW Natural's other revenue includes gas storage activity, which includes Interstate Storage Services used to store natural gas for customers. Gas storage revenue is generally recognized over time as the gas storage service is provided to the customer and the amount of consideration received and recognized as revenue is dependent on set rates defined per the storage agreements. Noncash consideration in the form of dekatherms of natural gas is received as consideration for providing gas injection services to gas storage customers. This noncash consideration is measured at fair value using the average spot rate. Customer accounts are generally paid in full each month, and there is no right of return or warranty for services provided. Revenues include firm and interruptible storage services, net of the profit sharing amount refunded to NGD customers.

Asset Management Revenue
Revenues include the optimization of third-party storage assets and pipeline capacity and are provided net of the profit sharing amount refunded to NGD customers. Certain asset management revenues received are recognized over time using a straight-line approach over the term of each contract, and the amount of consideration received and recognized as revenue is dependent on a variable pricing model. Variable revenues earned above guaranteed amounts are estimated and recognized at the end of

each period using the most likely amount approach. Additionally, other asset management revenues may be based on a fixed rate. Generally, asset management accounts are settled on a monthly basis.

As of September 30, 2022, unrecognized revenue for the fixed component of the transaction price related to gas storage and asset management revenue was approximately $84.4 million. Of this amount, approximately $5.3 million will be recognized during the remainder of 2022, $18.6 million in 2023, $15.6 million in 2024, $13.5 million in 2025, $9.4 million in 2026 and $22.0 million thereafter. The amounts presented here are calculated using current contracted rates.

Appliance Retail Center Revenue

NW Natural owns and operates an appliance store that is open to the public, where customers can purchase natural gas home appliances. Revenue from the sale of appliances is recognized at the point in time in which the appliance is transferred to the third party responsible for delivery and installation services and when the customer has legal title to the appliance. It is required that the sale be paid for in full prior to transfer of legal title. The amount of consideration received and recognized as revenue varies with changes in marketing incentives and discounts offered to customers.

NW Holdings Other

NW Holdings' primary source of other revenue is providing water and wastewater services to customers. Water and wastewater service revenue is generally recognized over time upon delivery of the water commodity or service to the customer, and the amount of consideration received and recognized as revenue is dependent on the tariffs established in the states we operate. Customer accounts are to be paid in full each month or bi-monthly, and there is no right of return or warranty for services provided.

We applied the significant financing practical expedient and have not adjusted the consideration we expect to receive from water distribution and wastewater collection customers for the effects of a significant financing component as all payment arrangements are settled annually. Due to the election of the right to invoice practical expedient, we do not disclose the value of unsatisfied performance obligations.

7. LEASES

Lease Revenue

Leasing revenue primarily consists of NW Natural's North Mist natural gas storage agreement with Portland General Electric (PGE), which is billed under an OPUC-approved rate schedule and includes an initial 30-year term beginning May 2019 with options to extend, totaling up to an additional 50 years upon mutual agreement of the parties. Under U.S. GAAP, this agreement is classified as a sales-type lease and qualifies for regulatory accounting deferral treatment. The investment in the storage facility is included in rate base under a separately established cost-of-service tariff, with revenues recognized according to the tariff schedule. As such, the selling profit that was calculated upon commencement as part of the sale-type lease recognition was deferred and will be amortized over the lease term. Billing rates under the cost-of-service tariff will be updated annually to reflect current information including depreciable asset levels, forecasted operating expenses, and the results of regulatory proceedings, as applicable, and revenue received under this agreement is recognized as operating revenue on the consolidated statements of comprehensive income. There are no variable payments or residual value guarantees. The lease does not contain an option to purchase the underlying assets.

NW Natural also maintains a sales-type lease for specialized compressor facilities to provide high pressure compressed natural gas (CNG) services. Lease payments are outlined in an OPUC-approved rate schedule over a 10-year term. There are no variable payments or residual value guarantees. The selling profit computed upon lease commencement was not significant.

Our lessor portfolio also contains small leases of property owned by NW Natural and NW Holdings to third parties. These transactions are accounted for as operating leases and the revenue is recognized over the term of the lease agreement.

The components of lease revenue at NW Natural were as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
In thousands	2022	2021	2022	2021
Lease revenue				
Operating leases	$ 19	$ 18	$ 56	$ 61
Sales-type leases	4,279	4,367	12,839	13,104
Total lease revenue	$ 4,298	$ 4,385	$ 12,895	$ 13,165

Additionally, lease revenue of $0.3 million and $0.1 million was recognized for the three months ended September 30, 2022 and 2021, respectively, and lease revenue of $0.4 million was recognized for the nine months ended September 30, 2022 and 2021 related to operating leases associated with non-utility property rentals. Lease revenue related to these leases was presented in other income (expense), net on the consolidated statements of comprehensive income as it is non-operating income.

Total future minimum lease payments to be received under non-cancelable leases at September 30, 2022 are as follows:

In thousands	Operating	Sales-Type	Total
NW Natural:			
Remainder of 2022	$ 145	$ 4,217	$ 4,362
2023	76	16,557	16,633
2024	76	15,867	15,943
2025	67	15,306	15,373
2026	36	14,901	14,937
Thereafter	22	236,820	236,842
Total minimum lease payments	$ 422	$ 303,668	$ 304,090
Less: imputed interest		168,188	
Total leases receivable		$ 135,480	
Other (NW Holdings):			
Remainder of 2022	$ 13	$ —	$ 13
2023	51	—	51
2024	52	—	52
2025	53	—	53
2026	56	—	56
Thereafter	914	—	914
Total minimum lease payments	$ 1,139	$ —	$ 1,139
NW Holdings:			
Remainder of 2022	$ 158	$ 4,217	$ 4,375
2023	127	16,557	16,684
2024	128	15,867	15,995
2025	120	15,306	15,426
2026	92	14,901	14,993
Thereafter	936	236,820	237,756
Total minimum lease payments	$ 1,561	$ 303,668	$ 305,229
Less: imputed interest		168,188	
Total leases receivable		$ 135,480	

The total leases receivable above is reported under the NGD segment and the short- and long-term portions are included within other current assets and assets under sales-type leases on the consolidated balance sheets, respectively. The total amount of unguaranteed residual assets was $5.0 million, $4.6 million and $4.7 million at September 30, 2022 and 2021 and December 31, 2021, respectively, and is included in assets under sales-type leases on the consolidated balance sheets. Additionally, under regulatory accounting, the revenues and expenses associated with these agreements are presented on the consolidated statements of comprehensive income such that their presentation aligns with similar regulated activities at NW Natural.

Lease Expense

Operating Leases

We have operating leases for land, buildings and equipment. Our primary lease is for NW Natural's headquarters and operations center. Our leases have remaining lease terms of 2 months to 18 years. Many of our lease agreements include options to extend the lease, which we do not include in our minimum lease terms unless they are reasonably certain to be exercised. Short-term leases with a term of 12 months or less are not recorded on the balance sheet. As most of our leases do not provide an implicit rate and are entered into by NW Natural, we use an estimated discount rate representing the rate we would have incurred to finance the funds necessary to purchase the leased asset and is based on information available at the lease commencement date in determining the present value of lease payments.

The components of lease expense, a portion of which is capitalized, were as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
In thousands	2022	2021	2022	2021
NW Natural:				
Operating lease expense	$ 1,767	$ 1,735	$ 5,235	$ 5,123
Short-term lease expense	$ 105	$ 499	$ 684	$ 1,068
Other (NW Holdings):				
Operating lease expense	$ 7	$ 14	$ 22	$ 50
NW Holdings:				
Operating lease expense	$ 1,774	$ 1,749	$ 5,257	$ 5,173
Short-term lease expense	$ 105	$ 499	$ 684	$ 1,068

Supplemental balance sheet information related to operating leases as of September 30, 2022 and 2021 and December 31, 2021 is as follows:

In thousands	September 30,		December 31,
	2022	2021	2021
NW Natural:			
Operating lease right of use asset	$ 73,046	$ 75,565	$ 74,987
Operating lease liabilities - current liabilities	$ 1,298	$ 1,184	$ 1,273
Operating lease liabilities - non-current liabilities	78,436	79,752	79,431
Total operating lease liabilities	$ 79,734	$ 80,936	$ 80,704
Other (NW Holdings):			
Operating lease right of use asset	$ 99	$ 69	$ 62
Operating lease liabilities - current liabilities	$ 63	$ 29	$ 23
Operating lease liabilities - non-current liabilities	33	37	37
Total operating lease liabilities	$ 96	$ 66	$ 60
NW Holdings:			
Operating lease right of use asset	$ 73,145	$ 75,634	$ 75,049
Operating lease liabilities - current liabilities	$ 1,361	$ 1,213	$ 1,296
Operating lease liabilities - non-current liabilities	78,469	79,789	79,468
Total operating lease liabilities	$ 79,830	$ 81,002	$ 80,764

The weighted-average remaining lease terms and weighted-average discount rates for the operating leases at NW Natural were as follows:

In thousands	September 30,		December 31,
	2022	2021	2021
Weighted-average remaining lease term (years)	17.5	18.4	18.2
Weighted-average discount rate	7.3 %	7.2 %	7.2 %

<u>Headquarters and Operations Center Lease</u>

NW Natural commenced a 20-year operating lease agreement in March 2020 for a new headquarters and operations center in Portland, Oregon. There is an option to extend the term of the lease for two additional periods of seven years. There is a material timing difference between the minimum lease payments and expense recognition as calculated under operating lease accounting rules. OPUC issued an order allowing us to align our expense recognition with cash payments for ratemaking purposes. We recorded the difference between the minimum lease payments and the aggregate of the imputed interest on the finance lease obligation and amortization of the right-of-use asset as a deferred regulatory asset on our balance sheet. The balance of the regulatory asset was $6.6 million, $5.3 million and $5.7 million as of September 30, 2022 and 2021 and December 31, 2021, respectively.

Maturities of operating lease liabilities at September 30, 2022 were as follows:

In thousands	NW Natural	Other (NW Holdings)	NW Holdings
Remainder of 2022	$ 1,752	$ 8	$ 1,760
2023	7,046	26	7,072
2024	7,183	27	7,210
2025	7,185	20	7,205
2026	7,353	6	7,359
Thereafter	116,431	18	116,449
Total lease payments	146,950	105	147,055
Less: imputed interest	67,216	9	67,225
Total lease obligations	79,734	96	79,830
Less: current obligations	1,298	63	1,361
Long-term lease obligations	$ 78,436	$ 33	$ 78,469

As of September 30, 2022, there were no finance lease liabilities at NW Natural.

Supplemental cash flow information related to leases was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
In thousands	2022	2021	2022	2021
NW Natural:				
Cash paid for amounts included in the measurement of lease liabilities				
Operating cash flows from operating leases	$ 1,759	$ 1,727	$ 5,225	$ 5,113

Finance cash flows from finance leases	$	92	$	123	$	474	$	801
Right of use assets obtained in exchange for lease obligations								
Operating leases	$	—	$	—	$	—	$	154
Finance leases	$	6	$	75	$	226	$	169
Other (NW Holdings):								
Cash paid for amounts included in the measurement of lease liabilities								
Operating cash flows from operating leases	$	12	$	18	$	24	$	51
Right of use assets obtained in exchange for lease obligations								
Operating leases	$	61	$	—	$	61	$	—
NW Holdings:								
Cash paid for amounts included in the measurement of lease liabilities								
Operating cash flows from operating leases	$	1,771	$	1,745	$	5,249	$	5,164
Finance cash flows from finance leases	$	92	$	123	$	474	$	801
Right of use assets obtained in exchange for lease obligations								
Operating leases	$	61	$	—	$	61	$	154
Finance leases	$	6	$	75	$	226	$	169

Finance Leases

NW Natural also leases building storage spaces for use as a gas meter room in order to provide natural gas to multifamily or mixed use developments. These contracts are accounted for as finance leases and typically involve a one-time upfront payment with no remaining liability. The right of use assets for finance leases were $2.3 million, $1.9 million and $2.1 million at September 30, 2022 and 2021 and at December 31, 2021, respectively.

8. STOCK-BASED COMPENSATION

Stock-based compensation plans are designed to promote stock ownership in NW Holdings by employees, including officers. These compensation plans include a Long Term Incentive Plan (LTIP) and an Employee Stock Purchase Plan (ESPP). For additional information on stock-based compensation plans, see Note 8 in the 2021 Form 10-K and the updates provided below.

Long Term Incentive Plan
Performance Shares
LTIP performance shares incorporate a combination of market, performance, and service-based factors. During the nine months ended September 30, 2022, the final performance factor under the 2020 LTIP was approved and 31,830 performance-based shares were granted under the 2020 LTIP for accounting purposes. As such, NW Natural and other subsidiaries began recognizing compensation expense. In February 2021 and 2022, LTIP shares were awarded to participants; however, the agreements allow for one of the performance factors to remain variable until the first quarter of the third year of the award period. As the performance factor will not be approved until the first quarters of 2023 and 2024, respectively, there is not a mutual understanding of the awards' key terms and conditions between NW Holdings and the participants as of September 30, 2022, and therefore, no expense was recognized for the 2021 and 2022 awards. NW Holdings will calculate the grant date fair value and NW Natural will recognize expense over the remaining service period for each award once the final performance factor has been approved.

For the 2021 and 2022 LTIP awards, share payouts range from a threshold of 0% to a maximum of 200% based on achievement of pre-established goals. The performance criteria for the 2021 and 2022 performance shares consists of a three-year Return on Invested Capital (ROIC) threshold that must be satisfied and a cumulative EPS factor, which can be modified by a total shareholder return factor (TSR modifier) relative to the performance of peer group companies over the performance period of three years for each respective award. If the targets were achieved for the 2021 and 2022 awards, NW Holdings would grant for accounting purposes 55,250 and 55,870 shares in the first quarters of 2023 and 2024, respectively.

As of September 30, 2022, there was $0.1 million of unrecognized compensation cost associated with the 2020 LTIP grants, which is expected to be recognized through 2022.

Restricted Stock Units
During the nine months ended September 30, 2022, 46,812 RSUs were granted under the LTIP with a weighted-average grant date fair value of $46.60 per share. Generally, the RSUs awarded are forfeitable and include a performance-based threshold as well as a vesting period of four years from the grant date. The majority of our RSU grants obligate NW Holdings, upon vesting, to issue the RSU holder one share of common stock. The grant may also include a cash payment equal to the total amount of dividends paid per share between the grant date and vesting date of that portion of the RSU depending on the structure of the award agreement. The fair value of an RSU is equal to the closing market price of NW Holdings' common stock on the grant date. As of September 30, 2022, there was $3.8 million of unrecognized compensation cost from grants of RSUs, which is expected to be recognized over a period extending through 2026.

9. DEBT

Short-Term Debt
At September 30, 2022, NW Holdings and NW Natural had short-term debt outstanding of $141.0 million and $53.0 million, respectively. NW Holdings' short-term debt consisted of $88.0 million of balances outstanding under the credit agreement at NW Holdings and $53.0 million of commercial paper outstanding at NW Natural. The weighted average interest rate on the credit agreement at September 30, 2022 was 4.7% at NW Holdings. The weighted average interest rate of commercial paper at September 30, 2022 was 3.3% at NW Natural. At September 30, 2022, NW Natural's commercial paper had a maximum remaining maturity of 18 days and an average remaining maturity of 9 days.

Long-Term Debt
At September 30, 2022, NW Holdings and NW Natural had long-term debt outstanding of $1,337.6 million and $1,126.5 million, respectively, which included $8.3 million and $8.2 million of unamortized debt issuance costs at NW Holdings and NW Natural, respectively. NW Natural's long-term debt consists of first mortgage bonds (FMBs) with maturity dates ranging from 2023 through 2052, interest rates ranging from 2.8% to 7.9%, and a weighted average interest rate of 4.5%.

$50.0 million of long-term debt is scheduled to mature over the next twelve months as of September 30, 2022 at NW Natural.

In September 2022, NW Holdings entered into an 18-month credit agreement for $100.0 million and borrowed the full amount. The loan carried an interest rate of 4.1% at September 30, 2022, which is based on the Secured Overnight Financing Rate. The loan is due and payable on March 15, 2024. The credit agreement prohibits NW Holdings from permitting consolidated indebtedness to be greater than 70% of total capitalization, each as defined therein and calculated as of the end of each fiscal quarter. Failure to comply with this financial covenant would entitle the lenders to accelerate the maturity of the amounts outstanding under the credit agreement. NW Holdings was in compliance with this financial covenant as of September 30, 2022.

In September 2022, NWN Water entered into an 18-month credit agreement for $50.0 million and borrowed the full amount. The loan carried an interest rate of 4.1% at September 30, 2022, which is based on the Secured Overnight Financing Rate. The loan is due and payable on March 15, 2024. The credit agreement prohibits NWN Water and NW Holdings from permitting consolidated indebtedness to be greater than 70% of total capitalization, each as defined therein and calculated as of the end of each fiscal quarter. Failure to comply with this financial covenant would entitle the lenders to accelerate the maturity of the amounts outstanding under the credit agreement. NWN Water and NW Holdings were in compliance with this financial covenant as of September 30, 2022.

In July 2022, NW Natural entered into a Bond Purchase Agreement between NW Natural and the institutional investors named as purchasers therein (the Bond Purchase Agreement). The Bond Purchase Agreement provides for the issuance of $140.0 million aggregate principal amount of NW Natural's First Mortgage Bonds due in 2052 (the Bonds). The Bonds were issued on September 30, 2022. The Bonds bear interest at the rate of 4.8% per annum, payable semi-annually on March 30 and September 30 of each year, commencing March 30, 2023, and will mature on September 30, 2052. The Bonds are subject to redemption prior to maturity at the option of NW Natural, in whole or in part, (i) at any time prior to March 30, 2052, at a redemption price equal to 100% of the principal amount thereof plus a “make-whole” premium and accrued and unpaid interest thereon to the date of redemption, and (ii) at any time on and after March 30, 2052, at 100% of the principal amount thereof plus accrued and unpaid interest thereon to the date of redemption.

In June 2021, NWN Water entered into a five-year term loan credit agreement for $55.0 million and borrowed the full amount. The loan carried an interest rate of 3.5% at September 30, 2022, which is based upon the one-month LIBOR rate. The loan is guaranteed by NW Holdings and requires NW Holdings to maintain a consolidated indebtedness to total capitalization ratio of 70% or less. Failure to comply with this covenant would entitle the lenders to terminate their lending commitments and accelerate the maturity of all amounts outstanding. NW Holdings was in compliance with this covenant at September 30, 2022, with a consolidated indebtedness to total capitalization ratio of 56.9%.

Fair Value of Long-Term Debt

NW Holdings' and NW Natural's outstanding debt does not trade in active markets. The fair value of debt is estimated using the value of outstanding debt at natural gas distribution companies with similar credit ratings, terms, and remaining maturities to NW Holdings' and NW Natural's debt that actively trade in public markets. Substantially all outstanding debt at NW Holdings is comprised of NW Natural debt. These valuations are based on Level 2 inputs as defined in the fair value hierarchy. See Note 2 in the 2021 Form 10-K for a description of the fair value hierarchy.

The following table provides an estimate of the fair value of long-term debt, including current maturities of long-term debt, using market prices in effect on the valuation date:

	September 30,		December 31,
In thousands	2022	2021	2021
NW Natural:			
Gross long-term debt	$ 1,134,700	$ 864,700	$ 994,700
Unamortized debt issuance costs	(8,229)	(6,940)	(8,205)
Carrying amount	$ 1,126,471	$ 857,760	$ 986,495
Estimated fair value(1)	$ 927,372	$ 978,613	$ 1,110,741
NW Holdings:			
Gross long-term debt	$ 1,345,968	$ 923,355	$ 1,053,241
Unamortized debt issuance costs	(8,348)	(7,051)	(8,309)
Carrying amount	$ 1,337,620	$ 916,304	$ 1,044,932
Estimated fair value(1)	$ 1,133,087	$ 1,042,705	$ 1,174,500

(1) Estimated fair value does not include unamortized debt issuance costs.

10. PENSION AND OTHER POSTRETIREMENT BENEFIT COSTS

NW Natural maintains a qualified non-contributory defined benefit pension plan (Pension Plan), non-qualified supplemental pension plans for eligible executive officers and other key employees, and other postretirement employee benefit plans. NW Natural also has a qualified defined contribution plan (Retirement K Savings Plan) for all eligible employees. The Pension Plan and Retirement K Savings Plan have plan assets, which are held in qualified trusts to fund retirement benefits.

The service cost component of net periodic benefit cost for NW Natural pension and other postretirement benefit plans is recognized in operations and maintenance expense in the consolidated statements of comprehensive income. The other non-service cost components are recognized in other income (expense), net in the consolidated statements of comprehensive income.

The following table provides the components of net periodic benefit cost (credit) for the pension and other postretirement benefit plans:

	Three Months Ended September 30,				Nine Months Ended September 30,			
	Pension Benefits		Other Postretirement Benefits		Pension Benefits		Other Postretirement Benefits	
In thousands	2022	2021	2022	2021	2022	2021	2022	2021
Service cost	$ 1,022	$ 1,717	$ 34	$ 69	$ 4,450	$ 5,145	$ 145	$ 180
Interest cost	4,260	3,316	213	180	10,945	10,001	543	510
Expected return on plan assets	(7,076)	(5,802)	—	—	(19,274)	(18,000)	—	—
Amortization of prior service credit	—	—	(15)	(119)	—	—	(249)	(353)
Amortization of net actuarial loss	(1,542)	5,515	57	226	9,459	16,516	319	488
Net periodic benefit cost (credit)	(3,336)	4,746	289	356	5,580	13,662	758	825
Amount allocated to construction	(496)	(759)	(14)	(27)	(1,965)	(2,228)	(57)	(70)
Net periodic benefit cost (credit) charged to expense	(3,832)	3,987	275	329	3,615	11,434	701	755
Amortization of regulatory balancing account	675	675	—	—	4,757	4,757	—	—
Net amount charged to expense	$ (3,157)	$ 4,662	$ 275	$ 329	$ 8,372	$ 16,191	$ 701	$ 755

Net periodic benefit costs are reduced by amounts capitalized to NGD plant. In addition, net periodic benefit costs were recorded to a regulatory balancing account as approved by the OPUC and amortized accordingly.

The following table presents amounts recognized in accumulated other comprehensive loss (AOCL) and the changes in AOCL related to non-qualified employee benefit plans:

	Three Months Ended September 30,		Nine Months Ended September 30,	
In thousands	2022	2021	2022	2021
Beginning balance	$ (11,010)	$ (12,460)	$ (11,404)	$ (12,902)
Amounts reclassified from AOCL:				
Amortization of actuarial losses	275	314	811	916
Total reclassifications before tax	275	314	811	916
Tax benefit	(73)	(80)	(215)	(240)
Total reclassifications for the period	202	234	596	676
Ending balance	$ (10,808)	$ (12,226)	$ (10,808)	$ (12,226)

Employer Contributions to Company-Sponsored Defined Benefit Pension Plans

NW Natural made no cash contributions to its qualified defined benefit pension plans during the nine months ended September 30, 2022 compared to $9.6 million for the same period in 2021. NW Natural does not expect to make any plan contributions during the remainder of 2022 as a result of adopting the American Rescue Plan Act.

Defined Contribution Plan

NW Natural's Retirement K Savings Plan is a qualified defined contribution plan under Internal Revenue Code Sections 401(a) and 401(k). NW Natural contributions totaled $7.4 million and $6.7 million for the nine months ended September 30, 2022 and 2021, respectively.

See Note 10 in the 2021 Form 10-K for more information concerning these retirement and other postretirement benefit plans.

11. INCOME TAX

An estimate of annual income tax expense is made each interim period using estimates for annual pre-tax income, regulatory flow-through adjustments, tax credits, and other items. The estimated annual effective tax rate is applied to year-to-date, pre-tax income to determine income tax expense for the interim period consistent with the annual estimate. Discrete events are recorded in the interim period in which they occur or become known.

The effective income tax rate varied from the federal statutory rate due to the following:

	Three Months Ended September 30,			
	NW Holdings		NW Natural	
In thousands	2022	2021	2022	2021
Income tax at statutory rate (federal)	$ (5,533)	$ (5,834)	$ (5,305)	$ (5,928)
State income tax	(2,376)	(2,599)	(2,306)	(2,618)
Increase (decrease):				
Differences required to be flowed-through by regulatory commissions	1,232	1,318	1,232	1,318
Other, net	(81)	(12)	(76)	16
Total provision for income taxes	$ (6,758)	$ (7,127)	$ (6,455)	$ (7,212)
Effective income tax rate	25.7 %	25.7 %	25.6 %	25.5 %

	Nine Months Ended September 30,			
	NW Holdings		NW Natural	
In thousands	2022	2021	2022	2021
Income tax at statutory rate (federal)	$ 10,710	$ 10,764	$ 11,554	$ 11,195
State income tax	4,298	4,660	4,497	4,748
Increase (decrease):				
Differences required to be flowed-through by regulatory commissions	(2,003)	(2,266)	(2,003)	(2,266)
Other, net	(370)	(41)	(370)	(49)
Total provision for income taxes	$ 12,635	$ 13,117	$ 13,678	$ 13,628
Effective income tax rate	24.8 %	25.6 %	24.9 %	25.6 %

The NW Holdings and NW Natural effective income tax rates for the nine months ended September 30, 2022 compared to the same period in 2021 changed primarily as a result of changes in pre-tax income. See Note 11 in the 2021 Form 10-K for more detail on income taxes and effective tax rates.

The IRS Compliance Assurance Process (CAP) examination of the 2020 tax year was completed during the first quarter of 2022. There were no material changes to the return as filed. The 2021 and 2022 tax years are subject to examination under CAP.

12. PROPERTY, PLANT, AND EQUIPMENT

The following table sets forth the major classifications of property, plant, and equipment and accumulated depreciation:

	September 30,				December 31,	
In thousands	2022		2021		2021	
NW Natural:						
NGD plant in service	$	3,888,092	$	3,663,699	$	3,721,939
NGD construction work in progress		161,658		120,412		135,398
Less: Accumulated depreciation		1,135,965		1,086,510		1,098,715
NGD plant, net		2,913,785		2,697,601		2,758,622
Other plant in service		69,626		66,314		69,332
Other construction work in progress		5,112		7,228		4,971
Less: Accumulated depreciation		21,435		20,392		20,646
Other plant, net		53,303		53,150		53,657
Total property, plant, and equipment, net	$	2,967,088	$	2,750,751	$	2,812,279
Other (NW Holdings):						
Other plant in service	$	66,208	$	53,175	$	57,184
Other construction work in progress		16,632		8,268		8,419
Less: Accumulated depreciation		8,750		5,832		6,512
Other plant, net	$	74,090	$	55,611	$	59,091
NW Holdings:						
Total property, plant, and equipment, net	$	3,041,178	$	2,806,362	$	2,871,370
NW Natural:						
Capital expenditures in accrued liabilities	$	43,954	$	33,968	$	37,537
NW Holdings:						
Capital expenditures in accrued liabilities	$	45,374	$	35,955	$	38,333

NW Natural
Other plant balances include non-utility gas storage assets at the Mist facility and other long-lived assets not related to NGD.

NW Holdings
Other plant balances include long-lived assets associated with water and wastewater operations and non-regulated activities not held by NW Natural or its subsidiaries.

13. INVESTMENTS

Investments include gas reserves, financial investments in life insurance policies, and equity method investments. The following table summarizes other investments:

	NW Holdings			NW Natural		
	September 30,		December 31,	September 30,		December 31,
In thousands	2022	2021	2021	2022	2021	2021
Investments in life insurance policies	$ 49,043	$ 47,970	$ 48,178	$ 49,043	$ 47,970	$ 48,178
Investments in gas reserves, non-current	23,770	28,021	26,608	23,770	28,021	26,608
Investment in unconsolidated affiliates	23,756	36	14,492	8,058	—	—
Total other investments	$ 96,569	$ 76,027	$ 89,278	$ 80,871	$ 75,991	$ 74,786

Investment in Life Insurance Policies

Other investments include financial investments in life insurance policies, which are accounted for at cash surrender value, net of policy loans. See Note 13 in the 2021 Form 10-K.

NW Natural Gas Reserves

NW Natural has invested $188 million through the gas reserves program in the Jonah Field located in Wyoming as of September 30, 2022. Gas reserves are stated at cost, net of regulatory amortization, with the associated deferred tax benefits of $5.5 million, $7.8 million, and $6.9 million, which are recorded as liabilities in the September 30, 2022, September 30, 2021, and December 31, 2021 consolidated balance sheets, respectively. NW Natural's investment is included in NW Holdings' and NW Natural's consolidated balance sheets under other current assets and other investments (non-current portion) with the maximum loss exposure limited to the investment balance. The amount of gas reserves included in other current assets was $3.7 million, $6.3 million, and $5.4 million as of September 30, 2022, September 30, 2021, and December 31, 2021, respectively. See Note 13 in the 2021 Form 10-K.

Investments in Unconsolidated Affiliates

In December 2021, NW Natural Water purchased a 37.3% ownership stake in Avion Water Company, Inc. (Avion Water), an investor-owned water utility for $14.5 million. In July 2022, NW Natural Water increased its ownership stake in Avion Water to 40.3% for an additional $1.0 million. Avion Water operates in Bend, Oregon and the surrounding communities, serving approximately 15,000 customer connections and employing 35 people. The carrying value of the equity method investment is $10.6 million higher than the underlying equity in the net assets of the investee at September 30, 2022 due to equity method goodwill. NW Natural Water's share in the earnings (loss) of Avion Water is included in other income (expense), net.

In 2020, NW Natural began a partnership with BioCarbN to invest in up to four separate RNG development projects that will access biogas derived from water treatment at Tyson Foods' processing plants, subject to approval by all parties. During the construction phase of the projects, NW Natural determined it is the primary beneficiary and fully consolidates each entity.

In 2022, commissioning of the first project, Lexington Renewable Energy LLC (Lexington), was completed and NW Natural determined it was no longer the primary beneficiary and deconsolidated the variable interest entity and recorded the investment in Lexington as an equity method investment. NW Natural accounts for its interest in Lexington using the equity method of accounting because NW Natural does not control but has the ability to exercise significant influence over Lexington's operations after commissioning. There was no gain or loss recognized upon deconsolidation. NW Natural determined the fair value of the investment approximated the carrying value which was primarily comprised of cash and property, plant and equipment. As of September 30, 2022, NW Natural had an investment balance in Lexington of $8.1 million. NW Natural's share in the earnings (loss) of Lexington is included in cost of gas.

14. BUSINESS COMBINATIONS

2022 Business Combinations

During the nine months ended September 30, 2022, NWN Water and its subsidiaries completed three acquisitions qualifying as business combinations. The aggregate fair value of the preliminary consideration transferred for these acquisitions was $4.2 million, most of which was preliminarily allocated to property, plant and equipment and goodwill. These transactions align with NW Holdings' water sector strategy as it continues to expand its water and wastewater service territories and included:

- Belle Oaks Water and Sewer Co., Inc was acquired by NWN Water of Texas in May 2022
- Northwest Water Services, LLC was acquired by NWN Water of Washington in August 2022
- Aquarius Utilities, LLC was acquired by NWN Water of Washington in August 2022

As each of these acquisitions met the criteria of a business combination, a preliminary allocation of the consideration to the acquired net assets based on their estimated fair value as of the acquisition date was performed. The allocation for each of these business combinations is considered preliminary as of September 30, 2022. In accordance with U.S. GAAP, the fair value determination involves management judgment in determining the significant estimates and assumptions used and was made using existing regulatory conditions for net assets associated with Belle Oaks Water and Sewer Co., Northwest Water Services, LLC, and Aquarius Utilities, LLC. These allocations are considered preliminary as of September 30, 2022, as facts and circumstances that existed as of the acquisition date may be discovered as we continue to integrate the acquired businesses. As a result, subsequent adjustments to the preliminary valuation of tangible assets, contract assets and liabilities, tax positions, and goodwill may be required. Subsequent adjustments are not expected to be significant, and any such adjustments are expected to be completed within the one-year measurement period for all acquisitions described above.

2021 Business Combinations
During 2021, NWN Water and its subsidiaries completed four acquisitions qualifying as business combinations. The aggregate fair value of the preliminary consideration transferred for these acquisitions were not material and are not significant to NW Holdings' results of operations.

Goodwill
NW Holdings allocates goodwill to reporting units based on the expected benefit from the business combination. We perform an annual impairment assessment of goodwill at the reporting unit level, or more frequently if events and circumstances indicate that goodwill might be impaired. An impairment loss is recognized if the carrying value of a reporting unit’s goodwill exceeds its fair value.

As a result of all acquisitions completed, total goodwill was $74.7 million, $69.8 million, and $70.6 million as of September 30, 2022, September 30, 2021, and December 31, 2021, respectively. All of our goodwill is related to water and wastewater acquisitions and is included in the other category for segment reporting purposes. The annual impairment assessment of goodwill occurs in the fourth quarter of each year. There have been no impairments recognized to date.

15. DERIVATIVE INSTRUMENTS

NW Natural enters into financial derivative contracts to hedge a portion of the NGD segment's natural gas sales requirements. These contracts include swaps, options, and combinations of option contracts. These derivative financial instruments are primarily used to manage commodity price variability. A small portion of NW Natural's derivative hedging strategy involves foreign currency forward contracts.

NW Natural enters into these financial derivatives, up to prescribed limits, primarily to hedge price variability related to term physical gas supply contracts as well as to hedge spot purchases of natural gas. The foreign currency forward contracts are used to hedge the fluctuation in foreign currency exchange rates for pipeline demand charges paid in Canadian dollars.

In the normal course of business, NW Natural also enters into indexed-price physical forward natural gas commodity purchase contracts and options to meet the requirements of NGD customers. These contracts qualify for regulatory deferral accounting treatment.

NW Natural also enters into exchange contracts related to the third-party asset management of its gas portfolio, some of which are derivatives that do not qualify for hedge accounting or only partial regulatory deferral, but are subject to NW Natural's regulatory sharing agreement. These derivatives are recognized in operating revenues, net of amounts shared with NGD customers.

Notional Amounts
The following table presents the absolute notional amounts related to open positions on NW Natural derivative instruments:

	September 30,		December 31,
In thousands	2022	2021	2021
Natural gas (in therms):			
Financial	1,006,665	749,595	618,815
Physical	672,350	613,524	431,628
Foreign exchange	$ 9,905	$ 6,299	$ 6,268

Purchased Gas Adjustment (PGA)
Under the PGA mechanism in Oregon, derivatives entered into by NW Natural for the procurement or hedging of natural gas for future gas years generally receive regulatory deferral accounting treatment. In general, commodity hedging for the current gas year is completed prior to the start of the gas year, and hedge prices are reflected in the weighted-average cost of gas in the PGA filing. Hedge contracts entered into prior to the PGA filing were included in the PGA for the 2022-23 gas year. Hedge contracts entered into after the start of the PGA period are subject to the PGA incentive sharing mechanism in Oregon. Under the PGA mechanism in Washington, NW Natural incorporates risk-responsive hedging strategies and receives regulatory deferral accounting treatment for its Washington gas supplies.

As of September 30, 2022, NW Natural's forecasted sales volume was hedged at approximately 80% in total for the 2022-23 gas year. The total hedged for Oregon was also approximately 80%, including 63% in financial hedges and 17% in physical gas supplies. The total hedged for Washington was approximately 79%, including 66% in financial hedges and 13% in physical gas supplies.

Unrealized and Realized Gain/Loss

The following table reflects the income statement presentation for the unrealized gains and losses from NW Natural's derivative instruments, which also represents all derivative instruments at NW Holdings:

	Three Months Ended September 30,			
	2022		2021	
In thousands	Natural gas commodity	Foreign exchange	Natural gas commodity	Foreign exchange
Benefit (expense) to cost of gas	$ (11,626)	$ (455)	$ 69,239	$ (106)
Operating revenues (expense)	—	—	—	—
Amounts deferred to regulatory accounts on balance sheet	11,626	455	(69,239)	106
Total gain (loss) in pre-tax earnings	$ —	$ —	$ —	$ —

	Nine Months Ended September 30,			
	2022		2021	
In thousands	Natural gas commodity	Foreign exchange	Natural gas commodity	Foreign exchange
Benefit (expense) to cost of gas	$ 32,827	$ (528)	$ 106,044	$ (74)
Operating revenues (expense)	—	—	(26)	—
Amounts deferred to regulatory accounts on balance sheet	(32,827)	528	(106,022)	74
Total gain (loss) in pre-tax earnings	$ —	$ —	$ (4)	$ —

Unrealized Gain/Loss

Outstanding derivative instruments related to regulated NGD operations are deferred in accordance with regulatory accounting standards. The cost of foreign currency forward and natural gas derivative contracts are recognized immediately in the cost of gas; however, costs above or below the amount embedded in the current year PGA are subject to a regulatory deferral tariff and therefore, are recorded as a regulatory asset or liability.

Realized Gain/Loss

NW Natural realized net gains of $16.9 million and $74.0 million for the three and nine months ended September 30, 2022, respectively, from the settlement of natural gas financial derivative contracts, whereas, net gains of $6.1 million and $15.4 million were realized for the three and nine months ended September 30, 2021, respectively. Realized gains and losses offset the higher or lower cost of gas purchased, resulting in no incremental amounts to collect or refund to customers.

Credit Risk Management of Financial Derivatives Instruments

No collateral was posted with or by NW Natural counterparties as of September 30, 2022 or 2021. NW Natural attempts to minimize the potential exposure to collateral calls by diversifying counterparties and using credit limits to manage liquidity risk. Counterparties generally allow a certain credit limit threshold before requiring NW Natural to post collateral against unrealized loss positions. Given NW Natural's credit ratings, counterparty credit limits and portfolio diversification, it was not subject to collateral calls in 2022 or 2021. The collateral call exposure is set forth under credit support agreements, which generally contain credit limits. NW Natural could also be subject to collateral call exposure where it has agreed to provide adequate assurance, which is not specific as to the amount of credit limit allowed, but could potentially require additional collateral posting by NW Natural in the event of a material adverse change.

NW Natural's financial derivative instruments are subject to master netting arrangements; however, they are presented on a gross basis in the consolidated balance sheets. NW Natural and its counterparties have the ability to set-off obligations to each other under specified circumstances. Such circumstances may include a defaulting party, a credit change due to a merger affecting either party, or any other termination event.

NW Natural's current commodity financial swap and option contracts outstanding reflect unrealized gains of $35.1 million and $132.2 million at September 30, 2022 and 2021. If netted by counterparty, NW Natural's physical and financial derivative position would result in an asset of $40.8 million and a liability of $8.5 million as of September 30, 2022, an asset of $124.5 million and a liability of $4.9 million as of September 30, 2021, and an asset of $51.8 million and a liability of $3.8 million as of December 31, 2021.

NW Natural is exposed to derivative credit and liquidity risk primarily through securing fixed price natural gas commodity swaps with financial counterparties. NW Natural utilizes master netting arrangements through International Swaps and Derivatives Association contracts to minimize this risk along with collateral support agreements with counterparties based on their credit ratings. Additionally, NW Natural uses counterparty, industry sector and country diversification to minimize credit risk. In certain cases, NW Natural may require counterparties to post collateral, guarantees, or letters of credit to maintain its minimum credit requirement standards. See Note 15 in the 2021 Form 10-K for additional information.

Fair Value

In accordance with fair value accounting, NW Natural includes non-performance risk in calculating fair value adjustments. This includes a credit risk adjustment based on the credit spreads of NW Natural counterparties when in an unrealized gain position, or on NW Natural's own credit spread when it is in an unrealized loss position. The inputs in our valuation models include natural gas futures, volatility, credit default swap spreads and interest rates. Additionally, the assessment of non-performance risk is generally derived from the credit default swap market and from bond market credit spreads. The impact of the credit risk adjustments for all financial derivatives outstanding was immaterial to the fair value calculation at September 30, 2022. The net fair value was an asset of $32.3 million, an asset of $119.6 million, and an asset of $48.0 million as of September 30, 2022 and 2021, and December 31, 2021, respectively. No Level 3 inputs were used in our derivative valuations during the nine months ended September 30, 2022 and 2021. See Note 2 in the 2021 Form 10-K.

16. ENVIRONMENTAL MATTERS

NW Natural owns, or previously owned, properties that may require environmental remediation or action. The range of loss for environmental liabilities is estimated based on current remediation technology, enacted laws and regulations, industry experience gained at similar sites, and an assessment of the probable level of involvement and financial condition of other potentially responsible parties (PRPs). When amounts are prudently expended related to site remediation of those sites described herein, NW Natural has recovery mechanisms in place to collect 96.7% of remediation costs allocable to Oregon customers and 3.3% of costs allocable to Washington customers.

These sites are subject to the remediation process prescribed by the Environmental Protection Agency (EPA) and the Oregon Department of Environmental Quality (ODEQ). The process begins with a remedial investigation (RI) to determine the nature and extent of contamination and then a risk assessment (RA) to establish whether the contamination at the site poses unacceptable risks to humans and the environment. Next, a feasibility study (FS) or an engineering evaluation/cost analysis (EE/CA) evaluates various remedial alternatives. It is at this point in the process when NW Natural is able to estimate a range of remediation costs and record a reasonable potential remediation liability, or make an adjustment to the existing liability. From this study, the regulatory agency selects a remedy and issues a Record of Decision (ROD). After a ROD is issued, NW Natural would seek to negotiate a consent decree or consent judgment for designing and implementing the remedy. NW Natural would have the ability to further refine estimates of remediation liabilities at that time.

Remediation may include treatment of contaminated media such as sediment, soil and groundwater, removal and disposal of media, institutional controls such as legal restrictions on future property use, or natural recovery. Following construction of the remedy, the EPA and ODEQ also have requirements for ongoing maintenance, monitoring and other post-remediation care that may continue for many years. Where appropriate and reasonably known, NW Natural will provide for these costs in the remediation liabilities described below.

Due to the numerous uncertainties surrounding the course of environmental remediation and the preliminary nature of several site investigations, in some cases, NW Natural may not be able to reasonably estimate the high end of the range of possible loss. In those cases, the nature of the possible loss has been disclosed, as has the fact that the high end of the range cannot be reasonably estimated where a range of potential loss is available. Unless there is an estimate within the range of possible losses that is more likely than other cost estimates within that range, NW Natural records the liability at the low end of this range. It is likely changes in these estimates and ranges will occur throughout the remediation process for each of these sites due to the continued evaluation and clarification concerning responsibility, the complexity of environmental laws and regulations and the determination by regulators of remediation alternatives. In addition to remediation costs, NW Natural could also be subject to Natural Resource Damages (NRD) claims. NW Natural will assess the likelihood and probability of each claim and recognize a liability if deemed appropriate. Refer to "Other Portland Harbor" below.

Environmental Sites

The following table summarizes information regarding liabilities related to environmental sites, which are recorded in other current liabilities and other noncurrent liabilities in NW Natural's balance sheet:

	Current Liabilities			Non-Current Liabilities		
	September 30,		December 31,	September 30,		December 31,
In thousands	2022	2021	2021	2022	2021	2021
Portland Harbor site:						
Gasco/Siltronic Sediments	$ 5,556	$ 6,925	$ 7,582	$ 40,740	$ 40,929	$ 42,076
Other Portland Harbor	2,430	2,392	2,592	8,135	6,222	9,570
Gasco/Siltronic Upland site	8,367	9,720	15,711	33,354	37,408	36,215
Front Street site	201	1,002	1,100	868	893	811
Oregon Steel Mills	—	—	—	179	179	179
Total	$ 16,554	$ 20,039	$ 26,985	$ 83,276	$ 85,631	$ 88,851

Portland Harbor Site

The Portland Harbor is an EPA listed Superfund site that is approximately 10 miles long on the Willamette River and is adjacent to NW Natural's Gasco uplands site. NW Natural is one of over one hundred PRPs, each jointly and severally liable, at the Superfund site. In January 2017, the EPA issued its Record of Decision, which selects the remedy for the clean-up of the Portland Harbor site (Portland Harbor ROD). The Portland Harbor ROD estimates the present value total cost at approximately $1.05 billion with an accuracy between -30% and +50% of actual costs.

NW Natural's potential liability is a portion of the costs of the remedy for the entire Portland Harbor Superfund site. The cost of that remedy is expected to be allocated among more than one hundred PRPs. NW Natural is participating in a non-binding allocation process with other PRPs in an effort to resolve its potential liability. The Portland Harbor ROD does not provide any additional clarification around allocation of costs among PRPs; accordingly, NW Natural has not modified any of the recorded liabilities at this time as a result of the issuance of the Portland Harbor ROD.

NW Natural manages its liability related to the Superfund site as two distinct remediation projects: the Gasco Sediments Site and Other Portland Harbor projects.

GASCO SEDIMENTS. In 2009, NW Natural and Siltronic Corporation entered into a separate Administrative Order on Consent with the EPA to evaluate and design specific remedies for sediments adjacent to the Gasco uplands and Siltronic uplands sites. NW Natural submitted a draft EE/CA to the EPA in May 2012 to provide the estimated cost of potential remedial alternatives for this site. In March 2020, NW Natural and the EPA amended the Administrative Order on Consent to include additional remedial design activities downstream of the Gasco sediments site and in the navigation channel. Siltronic Corporation is not a party to the amended order. In the second quarter of 2021, NW Natural began preliminary design discussions with the EPA for the Gasco sediments site. These preliminary design discussions did not include a cost estimate for cleanup. No design alternatives are more likely than the EE/CA alternatives at this time, and NW Natural expects further design discussion and iteration with the EPA.

The estimated costs for the various sediment remedy alternatives in the draft EE/CA, for the additional studies and design work needed before the cleanup can occur, and for regulatory oversight throughout the cleanup range from $46.3 million to $350 million. NW Natural has recorded a liability of $46.3 million for the Gasco sediment clean-up, which reflects the low end of the range. At this time, we believe sediments at the Gasco sediments site represent the largest portion of NW Natural's liability related to the Portland Harbor site discussed above.

OTHER PORTLAND HARBOR. While we believe liabilities associated with the Gasco sediments site represent NW Natural's largest exposure, there are other potential exposures associated with the Portland Harbor ROD, including NRD costs and harborwide remedial design and cleanup costs (including downstream petroleum contamination), for which allocations among the PRPs have not yet been determined.

NW Natural and other parties have signed a cooperative agreement with the Portland Harbor Natural Resource Trustee council to participate in a phased NRD assessment to estimate liabilities to support an early restoration-based settlement of NRD claims. One member of this Trustee council, the Yakama Nation, withdrew from the council in 2009, and in 2017, filed suit against NW Natural and 29 other parties seeking remedial costs and NRD assessment costs associated with the Portland Harbor site, set forth in the complaint. The complaint seeks recovery of alleged costs totaling $0.3 million in connection with the selection of a remedial action for the Portland Harbor site as well as declaratory judgment for unspecified future remedial action costs and for costs to assess the injury, loss or destruction of natural resources resulting from the release of hazardous substances at and from the Portland Harbor site. The Yakama Nation has filed two amended complaints addressing certain pleading defects and dismissing the State of Oregon. On the motion of NW Natural and certain other defendants, the federal court has stayed the case pending the outcome of the non-binding allocation proceeding discussed above. NW Natural has recorded a liability for NRD claims which is at the low end of the range of the potential liability; the high end of the range cannot be reasonably estimated at this time. The NRD liability is not included in the aforementioned range of costs provided in the Portland Harbor ROD.

Gasco Uplands Site

A predecessor of NW Natural, Portland Gas and Coke Company, owned a former gas manufacturing plant that was closed in 1958 (Gasco site) and is adjacent to the Portland Harbor site described above. The Gasco site has been under investigation by NW Natural for environmental contamination under the ODEQ Voluntary Cleanup Program (VCP). It is not included in the range of remedial costs for the Portland Harbor site noted above. The Gasco site is managed in two parts, the uplands portion and the groundwater source control action.

NW Natural submitted a revised Remedial Investigation Report for the uplands to ODEQ in May 2007. In March 2015, ODEQ approved the Risk Assessment (RA) for this site, enabling commencement of work on the FS in 2016. NW Natural has recognized a liability for the remediation of the uplands portion of the site which is at the low end of the range of potential liability; the high end of the range cannot be reasonably estimated at this time.

In October 2016, ODEQ and NW Natural agreed to amend their VCP agreement for the Gasco uplands to incorporate a portion of the Siltronic property formerly owned by Portland Gas & Coke between 1939 and 1960 into the Gasco RA and FS. Previously, NW Natural was conducting an investigation of manufactured gas plant constituents on the entire Siltronic uplands for ODEQ. Siltronic will be working with ODEQ directly on environmental impacts to the remainder of its property.

In September 2013, NW Natural completed construction of a groundwater source control system, including a water treatment station, at the Gasco site. NW Natural has estimated the cost associated with the ongoing operation of the system and has recognized a liability which is at the low end of the range of potential cost. NW Natural cannot estimate the high end of the range at this time due to the uncertainty associated with the duration of running the water treatment station, which is highly dependent on the remedy determined for both the upland portion as well as the final remedy for the Gasco sediments site.

Other Sites

In addition to those sites above, NW Natural has environmental exposures at three other sites: Central Service Center, Front Street and Oregon Steel Mills. NW Natural may have exposure at other sites that have not been identified at this time. Due to the uncertainty of the design of remediation, regulation, timing of the remediation and in the case of the Oregon Steel Mills site, pending litigation, liabilities for each of these sites have been recognized at their respective low end of the range of potential liability; the high end of the range could not be reasonably estimated at this time.

FRONT STREET SITE. The Front Street site was the former location of a gas manufacturing plant NW Natural operated (the former Portland Gas Manufacturing site, or PGM). At ODEQ’s request, NW Natural conducted a sediment and source control investigation and provided findings to ODEQ. In December 2015, an FS on the former Portland Gas Manufacturing site was completed.

In July 2017, ODEQ issued the PGM ROD. The ROD specifies the selected remedy, which requires a combination of dredging, capping, treatment, and natural recovery. In addition, the selected remedy also requires institutional controls and long-term inspection and maintenance. Construction of the remedy began in July 2020 and was completed in October 2020. The first year of post-construction monitoring was completed in 2021 and demonstrated that the cap was intact and performing as designed. NW Natural has recognized an additional liability of $1.1 million costs associated with the discovery during construction of World War II-era munitions, design costs, regulatory and permitting issues, and post-construction work.

OREGON STEEL MILLS SITE. Refer to "*Legal Proceedings"* below.

Environmental Cost Deferral and Recovery

NW Natural has authorizations in Oregon and Washington to defer costs related to remediation of properties that are owned or were previously owned by NW Natural. In Oregon, a Site Remediation and Recovery Mechanism (SRRM) is currently in place to recover prudently incurred costs allocable to Oregon customers, subject to an earnings test. On October 21, 2019, the WUTC authorized an Environmental Cost Recovery Mechanism (ECRM) for recovery of prudently incurred costs allocable to Washington customers beginning November 1, 2019. See Note 17 in the 2021 Form 10-K for a description of SRRM and ECRM collection processes.

The following table presents information regarding the total regulatory asset deferred:

	September 30,		December 31,
In thousands	2022	2021	2021
Deferred costs and interest (1)	$ 47,011	$ 45,019	$ 45,122
Accrued site liabilities (2)	99,795	105,607	115,773
Insurance proceeds and interest	(54,678)	(59,589)	(59,564)
Total regulatory asset deferral(1)	$ 92,128	$ 91,037	$ 101,331
Current regulatory assets(3)	9,461	7,068	6,694
Long-term regulatory assets(3)	82,667	83,969	94,636

(1) Includes pre-review and post-review deferred costs, amounts currently in amortization, and interest, net of amounts collected from customers.

(2) Excludes 3.3% of the Front Street site liability as the OPUC only allows recovery of 96.7% of costs for those sites allocable to Oregon, including those that historically served only Oregon customers. Amounts excluded from regulatory assets were $34 thousand at September 30, 2022, $62 thousand at September 30, 2021, and $62 thousand at December 31, 2021.

(3) Environmental costs relate to specific sites approved for regulatory deferral by the OPUC and WUTC. In Oregon, NW Natural earns a carrying charge on cash amounts paid, whereas amounts accrued but not yet paid do not earn a carrying charge until expended. It also accrues a carrying charge on insurance proceeds for amounts owed to customers. In Washington, neither the cash paid for insurance proceeds received accrue a carrying charge. Current environmental costs represent remediation costs management expects to collect from customers in the next 12 months. Amounts included in this estimate are still subject to a prudence and earnings test review by the OPUC and do not include the $5.0 million tariff rider. The amounts allocable to Oregon are recoverable through NGD rates, subject to an earnings test.

Environmental Earnings Test

To the extent NW Natural earns at or below its authorized Return on Equity (ROE) as defined by the SRRM, remediation expenses and interest in excess of the $5.0 million tariff rider and $5.0 million insurance proceeds are recoverable through the SRRM. To the extent NW Natural earns more than its authorized ROE in a year, it is required to cover environmental expenses and interest on expenses greater than the $10.0 million with those earnings that exceed its authorized ROE.

Legal Proceedings

NW Holdings is not currently party to any direct claims or litigation, though in the future it may be subject to claims and litigation arising in the ordinary course of business.

NW Natural is subject to claims and litigation arising in the ordinary course of business including the matters discussed above. Although the final outcome of any of these legal proceedings cannot be predicted with certainty, including the matter relating to the Oregon Steel Mills site referenced below, NW Natural and NW Holdings do not expect that the ultimate disposition of any of these matters will have a material effect on their financial condition, results of operations or cash flows. See also Part II, Item 1, *"Legal Proceedings"*.

Oregon Steel Mills Site

See Note 17 in the 2021 Form 10-K.

For additional information regarding other commitments and contingencies, see Note 16 in the 2021 Form 10-K.

17. SUBSEQUENT EVENT

In October 2022, NW Natural Water completed the acquisition of the water and wastewater utilities of Far West Water & Sewer, Inc. for approximately $88 million in cash consideration, subject to closing adjustments. Located in Yuma, Arizona, these utilities serve approximately 25,000 connections in the Foothills area and employ approximately 40 people. Going forward, the utilities will be doing business as Foothills Utilities.

The preliminary allocation of consideration to the acquired assets and assumed liabilities based on their fair value is not yet complete as valuation procedures are pending. Acquisition costs were insignificant and were expensed as incurred.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following is management's assessment of NW Holdings' and NW Natural's financial condition, including the principal factors that affect results of operations. The discussion refers to the consolidated results for the three and nine months ended September 30, 2022 and 2021 of NW Holdings, the substantial majority of which consist of the operating results of NW Natural. When significant activity exists at NW Holdings that does not exist at NW Natural, additional disclosure has been provided. References in this discussion to "Notes" are to the Notes to Unaudited Consolidated Financial Statements in this report. A significant portion of the business results are seasonal in nature, and, as such, the results of operations for the three month period is not necessarily indicative of expected fiscal year results. Therefore, this discussion should be read in conjunction with NW Holdings' and NW Natural's 2021 Annual Report on Form 10-K, as applicable (2021 Form 10-K).

NW Natural's natural gas distribution activities are reported in the natural gas distribution (NGD) segment. The NGD segment also includes NWN Gas Reserves, which is a wholly-owned subsidiary of Energy Corp, the NGD-portion of NW Natural's Mist storage facility in Oregon, and NW Natural RNG Holding Company, LLC. NW Natural RNG Holding Company, LLC holds an investment in Lexington Renewable Energy, LLC, which is accounted for under the equity method. Other activities aggregated and reported as other at NW Natural include the non-NGD storage activity at Mist as well as asset management services and the appliance retail center operations. Other activities aggregated and reported as other at NW Holdings include NNG Financial's investment in Kelso-Beaver Pipeline (KB Pipeline) and NWN Water's investment in Avion Water Company, Inc., which are accounted for under the equity method, NW Natural Renewables Holdings, LLC and its non-regulated renewable natural gas activities; and NWN Water, which through itself or its subsidiaries, owns and continues to pursue investments in the water sector. See Note 4 for further discussion of our business segment and other, as well as our direct and indirect wholly-owned subsidiaries.

NON-GAAP FINANCIAL MEASURES. In addition to presenting the results of operations and earnings amounts in total, certain financial measures are expressed in cents per share, which are non-GAAP financial measures. All references in this section to earnings per share (EPS) are on the basis of diluted shares. We use such non-GAAP financial measures to analyze our financial performance because we believe they provide useful information to our investors, analysts and creditors in evaluating our financial condition and results of operations. Our non-GAAP financial measures should not be considered a substitute for, or superior to, measures calculated in accordance with U.S. GAAP. Moreover, these non-GAAP financial measures have limitations in that they do not reflect all the items associated with the operations of the business as determined in accordance with GAAP. Other companies may calculate similarly titled non-GAAP financial measures differently than how such measures are calculated in this report, limiting the usefulness of those measures for comparative purposes. A reconciliation of each non-GAAP financial measure to the most directly comparable GAAP financial measure is provided below.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Earnings (loss) per share of common stock (diluted) - Total	$ (0.56)	$ (0.67)	$ 1.14	$ 1.24
Diluted earnings (loss) per share - NGD segment(1)	(0.66)	(0.76)	0.97	0.95
Diluted earnings per share - NW Holdings - other(1)	0.10	0.09	0.17	0.29

(1) Non-GAAP financial measure

EXECUTIVE SUMMARY

Current financial results and highlights include:

- Reported a net loss of $19.6 million or $0.56 per share (diluted) for the third quarter of 2022, compared to net loss of $20.7 million or $0.67 per share (diluted) in the prior year;
- Reported net income of $38.4 million or $1.14 per share (diluted) for the first nine months of 2022, compared to net income of $38.1 million or $1.24 per share (diluted) in the prior year;
- Added nearly 8,800 meters during the past twelve months for a growth rate of 1.1% at September 30, 2022;
- Invested over $250 million in our utility systems in the first nine months of 2022 in an effort to achieve greater reliability and resiliency;
- Received Oregon rate case order providing a revenue requirement increase of approximately $59.4 million;
- Received approval in Oregon and Washington for new rates related to the Purchased Gas Adjustment (PGA) mechanism, which includes estimated gas costs for the upcoming winter heating season;
- Closed two water and wastewater acquisitions near our existing service territory in Washington state and closed our largest water and wastewater acquisition to date in Yuma, Arizona, increasing our water sector customer base by approximately 70%; and
- Increased our dividend for the 67th consecutive year to an annual indicated dividend rate of $1.94 per share.

Key quarter-to-date financial highlights for NW Holdings include:

	Three Months Ended September 30,				
	2022		2021		QTD
In thousands, except per share data	Amount	Per Share	Amount	Per Share	Change
Consolidated net loss	$ (19,587)	$ (0.56)	$ (20,655)	$ (0.67)	$ 1,068

Key quarter-to-date financial highlights for NW Natural include:

	Three Months Ended September 30,		
	2022	2021	QTD
In thousands	Amount	Amount	Change
Consolidated net loss	$ (18,806)	$ (21,018)	$ 2,212
Natural gas distribution margin	$ 61,687	$ 61,076	$ 611

THREE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021.

Consolidated net loss decreased $2.2 million at NW Natural primarily due to the following factors:

- $3.5 million increase in other income, net primarily due to lower pension costs;
- $2.1 million increase in asset management revenues; partially offset by
- $2.1 million increase in operations and maintenance expenses primarily due to amortization expense related to cloud computing arrangements, professional service fees, and higher contract labor; and
- $1.0 million increase in depreciation expense and general taxes due to additional capital investments.

Consolidated net loss decreased $1.1 million at NW Holdings primarily due to the following factors:

- $2.2 million decrease in consolidated net loss at NW Natural as discussed above; partially offset by
- $1.1 million decrease in other net income primarily reflecting higher interest expense at the holding company.

Key year-to-date financial highlights for NW Holdings include:

	Nine Months Ended September 30,				
	2022		2021		YTD
In thousands, except per share data	Amount	Per Share	Amount	Per Share	Change
Consolidated net income	$ 38,367	$ 1.14	$ 38,138	$ 1.24	$ 229

Key year-to-date financial highlights for NW Natural include:

	Nine Months Ended September 30,		
	2022	2021	YTD
In thousands	Amount	Amount	Change
Consolidated net income	$ 41,343	$ 39,682	$ 1,661
Natural gas distribution margin	$ 333,797	$ 324,922	$ 8,875

NINE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021.

Consolidated net income increased $1.7 million at NW Natural primarily due to the following factors:
- $8.9 million increase in NGD segment margin driven by customer growth, new rates in Washington, and higher usage by non-decoupled customers; and
- $8.7 million increase in other income, net primarily due to lower pension costs; partially offset by
- $10.7 million increase in operations and maintenance expenses due to higher contract labor, amortization expense related to cloud computing arrangements, professional service fees, and information technology costs;
- $3.2 million decrease in asset management revenue primarily due to the February 2021 cold weather event discussed below that did not recur in the current year; and
- $2.0 million increase in depreciation expense and general taxes due to additional capital investments.

Consolidated net income increased $0.2 million at NW Holdings primarily due to the following factors:
- $1.7 million increase in consolidated net income at NW Natural as discussed above; partially offset by
- $1.4 million decrease in other net income primarily reflecting costs associated with non-regulated renewable natural gas activities and higher interest expense at the holding company.

2021 COLD WEATHER EVENT. In February 2021, Portland, Oregon and the surrounding region, like much of the country, experienced a severe winter storm with several days of colder temperatures resulting in elevated natural gas demand and significantly higher spot prices. Additional market gas purchases and other expenses resulted in approximately $29 million of higher commodity costs, of which approximately $27 million was deferred to a regulatory asset for recovery in future rates. The result was approximately $2 million of lower natural gas utility margin in the first three months of 2021. The higher commodity costs were offset by approximately $39 million of asset management revenue, of which approximately $33 million was deferred to a regulatory liability for the benefit of customers.

CURRENT ECONOMIC CONDITIONS. We are evaluating and monitoring current economic conditions, geopolitical uncertainty, which include but are not limited to: inflation, rising interest rates and commodity costs, heightened cybersecurity awareness, and supply chain disruptions. We have enhanced cybersecurity monitoring in response to reports that cybersecurity attacks have and will continue to increase. We have not experienced material disruptions in our supply chain for goods and services to date. Our suppliers may be subject to lack of personnel or disruption in their own supply chain for materials, which could disrupt supplier performance or deliveries, and negatively impact our business. Developers and HVAC suppliers have reported longer lead times for furnaces and other HVAC equipment, which may affect the timing of placing new meters into service particularly those converting to natural gas. However, because any supply chain issues are being experienced by vendors who supply directly to customers and not us, we do not have visibility of and are not able to quantify the number of new meters affected at this time. We are continuing to actively monitor, and have formulated and continue to evaluate contingency plans as necessary.

See the discussion in "*Results of Operations*", "*Regulatory Matters*" and "*Financial Condition*" below for additional detail regarding all significant activity that occurred during the third quarter of 2022.

DIVIDENDS

Dividend highlights include:

	Three Months Ended September 30,		Nine Months Ended September 30,		QTD Change	YTD Change
Per common share	2022	2021	2022	2021		
Dividends paid	$ 0.4825	$ 0.4800	$ 1.4475	$ 1.4400	$ 0.0025	$ 0.0075

In October 2022, the Board of Directors of NW Holdings declared a quarterly dividend on NW Holdings common stock of $0.4850 per share. The dividend is payable on November 15, 2022 to shareholders of record on October 31, 2022, reflecting an annual indicated dividend rate of $1.94 per share.

RESULTS OF OPERATIONS

Business Segment - Natural Gas Distribution (NGD)

NGD margin results are primarily affected by customer growth, revenues from rate-base additions, and, to a certain extent, by changes in delivered volumes due to weather and customers' gas usage patterns. In Oregon, NW Natural has a conservation tariff (also called the decoupling mechanism), which adjusts margin up or down each month through a deferred regulatory accounting adjustment designed to offset changes resulting from increases or decreases in average use by residential and commercial customers. NW Natural also has a weather normalization tariff in Oregon, WARM, which adjusts customer bills up or down to offset changes in margin resulting from above- or below-average temperatures during the winter heating season. Both mechanisms are designed to reduce, but not eliminate, the volatility of customer bills and natural gas distribution earnings. For additional information, see Part II, Item 7 "Results of Operations—Regulatory Matters—*Rate Mechanisms"* in NW Natural's 2021 Form 10-K. In addition to NW Natural's local gas distribution business, the NGD segment also includes the portion of the Mist underground storage facility used to serve NGD customers, the North Mist gas storage expansion, NWN Gas Reserves, which is a wholly owned subsidiary of Energy Corp., and NW Natural RNG Holding Company, LLC.

The NGD business is primarily seasonal in nature due to higher gas usage by residential and commercial customers during the cold winter heating months. Other categories of customers experience seasonality in their usage but to a lesser extent. Seasonality affects the comparability of the results of operations of the NGD business across quarters but not across years.

NGD segment highlights include:

	Three Months Ended September 30,		Nine Months Ended September 30,		QTD Change	YTD Change
In thousands, except EPS data	2022	2021	2022	2021		
NGD net income (loss)	$ (23,016)	$ (23,297)	$ 32,531	$ 29,247	$ 281	$ 3,284
Diluted EPS - NGD segment	$ (0.66)	$ (0.76)	$ 0.97	$ 0.95	$ 0.10	$ 0.02
Gas sold and delivered (in therms)	158,561	161,229	855,500	806,063	(2,668)	49,437
NGD margin(1)	$ 61,687	$ 61,076	$ 333,797	$ 324,922	$ 611	$ 8,875

(1) See Natural Gas Distribution Margin Table below for additional detail.

THREE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. The primary factors contributing to the $0.3 million, or $0.10 per share, decrease in NGD net loss were as follows:

- $3.1 million increase in other income, net driven by lower pension non-service costs; and
- $0.6 million increase in NGD margin due to:
  - $0.4 million increase due to new customer rates from the 2021 Washington rate case that went into effect on November 1, 2021; and
  - $0.3 million increase driven by customer growth; partially offset by
- $2.3 million increase in NGD operating and maintenance expenses due primarily to amortization expense related to cloud computing arrangements, professional service fees, and higher contract labor; and
- $1.0 million increase in depreciation expense and general taxes due to additional capital investments in the distribution system. In addition, we placed two significant information technology projects into service in September 2022.

For the three months ended September 30, 2022, total NGD volumes sold and delivered decreased 2% over the same period in 2021 primarily due to lower usage by industrial transportation and residential customers.

NINE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. The primary factors contributing to the $3.3 million increase in NGD net income were as follows:

- $8.9 million increase in NGD margin due to:
  - $3.9 million increase driven by customer growth;
  - $2.8 million increase due to new customer rates from the 2021 Washington rate case that went into effect on November 1, 2021;
  - $2.4 million increase due to higher usage from colder comparative weather from customers that are not decoupled, net of the loss from the Oregon gas cost incentive sharing mechanism; and
- $8.3 million increase in other income, net driven by lower pension non-service costs; partially offset by
- $11.2 million increase in NGD operations and maintenance expenses due to higher contract labor, amortization expense related to cloud computing arrangements, professional service fees, and information technology costs; and
- $2.0 million increase in depreciation expense and general taxes as we continue to invest in our natural gas utility system.

For the nine months ended September 30, 2022, total NGD volumes sold and delivered increased 6% over the same period in 2021 primarily due to 3% warmer than average weather in the first nine months of 2022 compared to 12% warmer than average weather in the prior period.

NATURAL GAS DISTRIBUTION MARGIN TABLE. The following table summarizes the composition of NGD gas volumes, revenues, and cost of sales:

In thousands, except degree day and customer data	Three Months Ended September 30, 2022	Three Months Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021	Favorable/ (Unfavorable) QTD Change	Favorable/ (Unfavorable) YTD Change
NGD volumes (therms)						
Residential and commercial sales	53,929	55,597	495,303	455,888	(1,668)	39,415
Industrial sales and transportation	104,632	105,632	360,197	350,175	(1,000)	10,022
Total NGD volumes sold and delivered	158,561	161,229	855,500	806,063	(2,668)	49,437
Operating Revenues						
Residential and commercial sales	$ 78,459	$ 71,979	$ 552,858	$ 470,923	$ 6,480	$ 81,935
Industrial sales and transportation	19,581	14,000	60,380	45,472	5,581	14,908
Other distribution revenues	351	292	1,367	1,278	59	89
Other regulated services	4,904	4,771	14,722	14,321	133	401
Total operating revenues	103,295	91,042	629,327	531,994	12,253	97,333
Less: Cost of gas	36,258	25,322	261,678	178,837	(10,936)	(82,841)
Less: Environmental remediation expense	975	806	7,945	6,092	(169)	(1,853)
Less: Revenue taxes	4,375	3,838	25,907	22,143	(537)	(3,764)
NGD margin	$ 61,687	$ 61,076	$ 333,797	$ 324,922	$ 611	$ 8,875
Margin(1)						
Residential and commercial sales	$ 49,799	$ 49,302	$ 296,462	$ 288,974	$ 497	$ 7,488
Industrial sales and transportation	7,067	7,295	24,058	23,456	(228)	602
Loss from gas cost incentive sharing	(420)	(546)	(2,868)	(3,032)	126	164
Other margin	339	256	1,427	1,208	83	219
Other regulated services	4,902	4,769	14,718	14,316	133	402
NGD Margin	$ 61,687	$ 61,076	$ 333,797	$ 324,922	$ 611	$ 8,875
Degree days(2)						
Average(3)	9	9	1,640	1,640	—	—
Actual	—	4	1,591	1,447	(100)%	10 %
Percent warmer than average weather(4)	NM	NM	(3)%	(12)%		

	As of September 30, 2022	As of September 30, 2021	Change	Growth
NGD Meters - end of period:				
Residential meters	720,846	712,335	8,511	1.2%
Commercial meters	68,587	68,414	173	0.3%
Industrial meters	1,078	978	100	10.2%
Total number of meters	790,511	781,727	8,784	1.1%

(1) Amounts reported as NGD margin for each category of meters are operating revenues less cost of gas, environmental remediation expense and revenue taxes, subject to earnings test considerations, as applicable.

(2) Heating degree days are units of measure reflecting temperature-sensitive consumption of natural gas, calculated by subtracting the average of a day's high and low temperatures from 59 degrees Fahrenheit.

(3) Average weather represents the 25-year average of heating degree days. Beginning November 1, 2020, average weather is calculated over the period June 1, 1994 through May 31, 2019, as determined in NW Natural's 2020 Oregon general rate case.

(4) NM indicates that the calculated value is not meaningful.

Residential and Commercial Sales

Residential and commercial sales highlights include:

	Three Months Ended September 30,		Nine Months Ended September 30,		QTD Change	YTD Change
In thousands	2022	2021	2022	2021		
Volumes (therms)						
Residential sales	28,394	30,391	304,739	286,228	(1,997)	18,511
Commercial sales	25,535	25,206	190,564	169,660	329	20,904
Total volumes	53,929	55,597	495,303	455,888	(1,668)	39,415
Operating revenues						
Residential sales	$ 50,160	$ 47,091	$ 374,635	$ 325,203	$ 3,069	$ 49,432
Commercial sales	28,299	24,888	178,223	145,720	3,411	32,503
Total operating revenues	$ 78,459	$ 71,979	$ 552,858	$ 470,923	$ 6,480	$ 81,935
NGD margin						
Residential NGD margin	$ 34,620	$ 34,292	$ 214,498	$ 209,101	$ 328	$ 5,397
Commercial NGD margin	15,179	15,010	81,964	79,873	169	2,091
Total NGD margin	$ 49,799	$ 49,302	$ 296,462	$ 288,974	$ 497	$ 7,488

THREE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Residential and commercial margin increased $0.5 million compared to the prior period. The increase was primarily driven by 1.2% growth in residential meters, and new customer rates in Washington that took effect on November 1, 2021. Volumes decreased 1.7 million therms due to lower usage by residential customers. The majority of these customers are decoupled, thus mitigating the impact to margin.

NINE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Residential and commercial margin increased $7.5 million compared to the prior period. The increase was primarily driven by 1.2% growth in residential meters, new customer rates in Washington that took effect on November 1, 2021, and higher usage from non-decoupled customers. Volumes increased 39.4 million therms due to higher usage driven by comparatively colder weather.

Industrial Sales and Transportation

Industrial sales and transportation highlights include:

	Three Months Ended September 30,		Nine Months Ended September 30,		QTD Change	YTD Change
In thousands	2022	2021	2022	2021		
Volumes (therms)						
Firm and interruptible sales	22,606	18,353	75,795	64,598	4,253	11,197
Firm and interruptible transportation	82,026	87,279	284,402	285,577	(5,253)	(1,175)
Total volumes - sales and transportation	104,632	105,632	360,197	350,175	(1,000)	10,022
NGD margin						
Firm and interruptible sales	$ 2,671	$ 2,735	$ 9,561	$ 9,033	$ (64)	$ 528
Firm and interruptible transportation	4,396	4,560	14,497	14,423	(164)	74
Total margin - sales and transportation	$ 7,067	$ 7,295	$ 24,058	$ 23,456	$ (228)	$ 602

THREE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Industrial sales and transportation margin decreased $0.2 million compared to the prior period. Volumes decreased 1.0 million therms primarily due to lower usage from multiple customers, most notably in the plastic manufacturing and food processing industries, partially offset by higher usage from customers in the primary metals industry.

NINE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Industrial sales and transportation margin increased $0.6 million compared to the prior period. Volumes increased 10.0 million therms primarily due to higher usage from multiple customers, most notably in the light manufacturing, primary metals, and electric manufacturing industries, partially offset by lower usage from customers in the plastic manufacturing industry.

Cost of Gas

Cost of gas highlights include:

	Three Months Ended September 30,		Nine Months Ended September 30,		QTD Change	YTD Change
In thousands	2022	2021	2022	2021		
Cost of gas	$ 36,258	$ 25,322	$ 261,678	$ 178,837	$ 10,936	$ 82,841
Volumes sold (therms)(1)	76,535	73,950	571,098	520,486	2,585	50,612
Average cost of gas (cents per therm)	$ 0.47	$ 0.34	$ 0.46	$ 0.34	$ 0.13	$ 0.12
Loss from gas cost incentive sharing(2)	$ (420)	$ (546)	$ (2,868)	$ (3,032)	$ 126	$ 164

(1)This calculation excludes volumes delivered to industrial transportation customers.

(2) For additional information regarding NW Natural's gas cost incentive sharing mechanism, see Part II, Item 7 "Results of Operations—Regulatory Matters—Rate Mechanisms—*Gas Reserves*" in NW Natural's 2021 Form 10-K.

THREE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Cost of gas increased $10.9 million primarily due to a 38% increase in average cost of gas with the majority of these higher gas costs embedded in the PGA, and customer growth. Volumes sold increased 2.6 million therms driven by higher usage from industrial sales customers.

NINE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Cost of gas increased $82.8 million primarily due to a 35% increase in average cost of gas with the majority of these higher gas costs embedded in the PGA, and customer growth. Volumes sold increased 50.6 million therms driven by 3% warmer than average weather in the first nine months of 2022 compared to 12% warmer than average weather in the prior period.

Other Regulated Services Margin

Other regulated services margin highlights include:

	Three Months Ended September 30,		Nine Months Ended September 30,		QTD Change	YTD Change
In thousands	2022	2021	2022	2021		
North Mist storage services	$ 4,858	$ 4,716	$ 14,573	$ 14,147	$ 142	$ 426
Other services	44	53	145	169	(9)	(24)
Total other regulated services	$ 4,902	$ 4,769	$ 14,718	$ 14,316	$ 133	$ 402

THREE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Other regulated services margin was relatively flat when compared to the prior period. The North Mist expansion facility did not experience any significant fluctuations in storage service revenue. See Note 7 for information regarding North Mist expansion lease accounting.

NINE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Other regulated services margin increased $0.4 million compared to the prior period due to scheduled rate increases in storage service revenue.

Other

Other activities aggregated and reported as other at NW Holdings include NNG Financial's investment in Kelso-Beaver Pipeline (KB Pipeline); NW Natural Renewables Holdings, LLC and its non-regulated renewable natural gas activities; NWN Water, which owns and continues to pursue investments in the water sector; and NWN Water's investment in Avion Water Company, Inc. (Avion Water). Other activities aggregated and reported as other at NW Natural include the non-NGD storage activity at Mist as well as asset management services and the appliance retail center operations. See Note 4 for further discussion of our business segment and other, as well as our direct and indirect wholly-owned subsidiaries. See Note 13 for information on our Avion Water investment.

The following table presents the results of activities aggregated and reported as other for both NW Holdings and NW Natural:

	Three Months Ended September 30,		Nine Months Ended September 30,		QTD Change	YTD Change
In thousands, except EPS data	2022	2021	2022	2021		
NW Natural other - net income	$ 4,210	$ 2,279	$ 8,812	$ 10,435	$ 1,931	$ (1,623)
Other NW Holdings activity	(781)	363	(2,976)	(1,544)	(1,144)	(1,432)
NW Holdings other - net income	$ 3,429	$ 2,642	$ 5,836	$ 8,891	$ 787	$ (3,055)
Diluted EPS - NW Holdings - other	$ 0.10	$ 0.09	$ 0.17	$ 0.29	$ 0.01	$ (0.12)

THREE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Other net income increased $0.8 million at NW Holdings and $1.9 million at NW Natural. The increase at NW Natural was primarily due to an increase in asset management revenues. The increase at NW Holdings was driven by the increase at NW Natural, partially offset by higher interest expense at the holding company.

NINE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Other net income decreased $1.6 million at NW Natural and $3.1 million at NW Holdings. The decrease at NW Natural was primarily due to lower asset management revenue mainly related to the 2021 cold weather event that did not recur in the current year. The decrease at NW Holdings was driven by the decrease at NW Natural, higher interest expense at the holding company, and costs associated with non-regulated renewable natural gas activities.

Consolidated Operations

Operations and Maintenance

Operations and maintenance highlights include:

	Three Months Ended September 30,				Nine Months Ended September 30,				QTD		YTD	
In thousands	2022		2021		2022		2021		Change		Change	
NW Natural	$	45,858	$	43,768	$	148,614	$	137,894	$	2,090	$	10,720
Other NW Holdings operations and maintenance		4,887		3,561		12,791		11,673		1,326		1,118
NW Holdings	$	50,745	$	47,329	$	161,405	$	149,567	$	3,416	$	11,838

THREE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Operations and maintenance expense increased $3.4 million at NW Holdings and $2.1 million at NW Natural. The increase at NW Natural was driven by the following:
- $0.9 million increase in amortization expense related to cloud computing arrangements;
- $0.5 million increase in professional service fees; and
- $0.4 million increase in contract labor for safety and reliability and contracted support for information technology and corporate projects.

The $1.3 million increase in other NW Holdings operations and maintenance expense primarily reflects costs associated with non-regulated renewable natural gas activities and higher business development costs at the holding company.

NINE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Operations and maintenance expense increased $11.8 million at NW Holdings and $10.7 million at NW Natural. The increase at NW Natural was driven by the following:
- $4.1 million increase in contract labor for safety and reliability and contracted support for information technology and corporate projects;
- $2.3 million increase in amortization expense related to cloud computing arrangements;
- $1.5 million increase in professional service fees;
- $1.2 million increase in information technology maintenance and support; and
- $1.0 million increase related to employee expenses.

The $1.1 million increase in other NW Holdings operations and maintenance expense primarily reflects costs associated with non-regulated renewable natural gas activities.

Depreciation

Depreciation highlights include:

	Three Months Ended September 30,				Nine Months Ended September 30,				QTD		YTD	
In thousands	2022		2021		2022		2021		Change		Change	
NW Natural	$	28,201	$	27,719	$	83,166	$	82,418	$	482	$	748
Other NW Holdings depreciation		825		719		2,399		2,261		106		138
NW Holdings	$	29,026	$	28,438	$	85,565	$	84,679	$	588	$	886

THREE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Depreciation expense increased $0.6 million and $0.5 million at NW Holdings and NW Natural, respectively, primarily due to additional capital investments in the distribution system and Mist storage, as well as renovation and construction of resource and operations service centers. In addition, we placed two significant information technology projects into service in September 2022. The increase was partially offset by the amortization of cloud computing arrangements, which are recorded within operations and maintenance expenses beginning in 2022.

NINE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Depreciation expense increased $0.9 million and $0.7 million at NW Holdings and NW Natural, respectively, primarily due to additional capital investments in the distribution system, Mist storage, and information technology systems, as well as renovation and construction of resource and operations service centers. The increase was partially offset by the amortization of cloud computing arrangements, which are recorded within operations and maintenance expenses beginning in 2022.

Other Income (Expense), Net

Other income (expense), net highlights include:

	Three Months Ended September 30,		Nine Months Ended September 30,		QTD	YTD
In thousands	2022	2021	2022	2021	Change	Change
NW Natural other income (expense), net	$ 1,161	$ (2,295)	$ 197	$ (8,526)	$ 3,456	$ 8,723
Other NW Holdings activity	475	79	711	171	396	540
NW Holdings other income (expense), net	$ 1,636	$ (2,216)	$ 908	$ (8,355)	$ 3,852	$ 9,263

THREE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Other income (expense), net changed $3.9 million and $3.5 million at NW Holdings and NW Natural, respectively, primarily due to lower pension non-service costs. Costs related to our defined benefit pension plan for 2022 are expected to decrease compared to the prior year due to changes in assumptions and gains on plan assets. The change at other NW Holdings was driven by the change at NW Natural. Other income (expense), net primarily consists of regulatory interest, pension and other postretirement non-service costs, gains from company-owned life insurance, and donations.

NINE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Other income (expense), net changed $9.3 million and $8.7 million at NW Holdings and NW Natural, respectively, primarily due to lower pension non-service costs. Costs related to our defined benefit pension plan for 2022 are expected to decrease compared to the prior year due to changes in assumptions and gains on plan assets. The change at other NW Holdings was driven by the change at NW Natural.

Interest Expense, Net

Interest expense, net highlights include:

	Three Months Ended September 30,		Nine Months Ended September 30,		QTD	YTD
In thousands	2022	2021	2022	2021	Change	Change
NW Natural	$ 11,128	$ 10,850	$ 32,558	$ 32,336	$ 278	$ 222
Other NW Holdings interest expense, net	1,926	325	3,598	993	1,601	2,605
NW Holdings	$ 13,054	$ 11,175	$ 36,156	$ 33,329	$ 1,879	$ 2,827

THREE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Interest expense, net increased $1.9 million and $0.3 million at NW Holdings and NW Natural, respectively. Interest expense, net at NW Natural increased $1.2 million due to higher interest expense on short and long-term debt, partially offset by $0.9 million of higher Allowance for Funds Used During Construction (AFUDC) debt interest income. The increase at NW Holdings is primarily due to higher interest expense on the Holdings' credit facility as a result of higher balances outstanding and higher interest rates.

NINE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Interest expense, net increased $2.8 million and $0.2 million at NW Holdings and NW Natural, respectively. Interest expense, net at NW Natural increased $2.1 million due to higher interest expense on short and long-term debt, partially offset by $1.9 million of higher AFUDC debt interest income. The increase at NW Holdings is primarily due to higher interest expense on Holdings' credit facility as a result of higher balances outstanding and higher interest rates.

Income Tax Expense (Benefit)

Income tax expense (benefit) highlights include:

	Three Months Ended September 30,		Nine Months Ended September 30,		QTD	YTD
In thousands	2022	2021	2022	2021	Change	Change
NW Natural income tax expense (benefit)	$ (6,455)	$ (7,212)	$ 13,678	$ 13,628	$ 757	$ 50
NW Holdings income tax expense (benefit)	$ (6,758)	$ (7,127)	$ 12,635	$ 13,117	$ 369	$ (482)

THREE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Income tax expense increased $0.8 million at NW Natural and $0.4 million at NW Holdings. The increase in income tax expense is primarily due to a higher pre-tax income in the current period compared to the prior year.

NINE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Income tax expense increased $0.1 million at NW Natural and decreased $0.5 million at NW Holdings. The decrease in income tax expense at NW Holdings is primarily due to a decrease in pre-tax income in the current period compared to the prior year.

Regulatory Matters

For additional information, see Part II, Item 7 "Results of Operations—*Regulatory Matters"* in the 2021 Form 10-K.

Regulation and Rates

NATURAL GAS DISTRIBUTION. NW Natural's natural gas distribution business is subject to regulation by the OPUC and WUTC with respect to, among other matters, rates and terms of service, systems of accounts, and issuances of securities by NW Natural. At September 30, 2022, approximately 88% of NGD customers were located in Oregon, with the remaining 12% in Washington. Earnings and cash flows from natural gas distribution operations are largely determined by rates set in general rate cases and other proceedings in Oregon and Washington. They are also affected by weather, the local economies in Oregon and Washington, the pace of customer growth in the residential, commercial, and industrial markets, legislation and policy, customer preferences and NW Natural's ability to remain price competitive, control expenses, and obtain reasonable and timely regulatory recovery of its natural gas distribution-related costs, including operating expenses and investment costs in plant and other regulatory assets. See "*Most Recent Completed Rate Cases"* below.

MIST INTERSTATE GAS STORAGE. NW Natural's interstate storage activity at Mist is subject to regulation by the OPUC, WUTC, and the Federal Energy Regulatory Commission (FERC) with respect to, among other matters, rates and terms of service. The OPUC also regulates the intrastate storage services at Mist, while FERC regulates the interstate storage services at Mist. The FERC uses a maximum cost of service model which allows for gas storage prices to be set at or below the cost of service as approved by each agency in their last regulatory filing. The OPUC Schedule 80 rates are tied to the FERC rates, and are updated whenever NW Natural modifies FERC maximum rates.

OTHER. The wholly owned regulated water businesses of NWN Water, a wholly owned subsidiary of NW Holdings, are subject to regulation by the utility commissions in the states in which they are located, which currently includes Oregon, Washington, Idaho, and Texas.

Most Recent Completed Rate Cases

OREGON. On December 17, 2021, NW Natural filed a request for a general rate case (Rate Case) with the OPUC. On May 31, 2022, NW Natural, the OPUC staff, the Oregon Citizens' Utility Board (CUB), the Alliance of Western Energy Consumers (AWEC), and the Small Business Utility Advocates (SBUA), which comprise some of the parties to the Rate Case, filed a stipulation with the OPUC addressing a number of issues in the Rate Case as well as a second docket, which was consolidated with the Rate Case (First Stipulation).

The First Stipulation provided for a total revenue requirement increase of $62.65 million over revenues from existing rates, subject to adjustment for capital additions and revenues related to new customers added in the test year and completion of capital projects identified as being placed into service prior to the rate effective date. The revenue requirement is based on the following assumptions:
•Capital structure of 50% common equity and 50% long-term debt;
•Return on equity (ROE) of 9.4%;
•Cost of capital of 6.836%; and
•Average rate base of $1.77 billion or an increase of $337 million compared to the last rate case.

On June 29, 2022, NW Natural, the OPUC staff, the Oregon CUB, AWEC, and the Coalition of Communities of Color, Climate Solutions, Verde, Columbia Riverkeeper, Oregon Environmental Council, Community Energy Project, and Sierra Club, which comprise some of the parties to the Rate Case, filed a second stipulation with the OPUC addressing a number of issues in the Rate Case that were not addressed in the First Stipulation (Second Stipulation). The Second Stipulation addressed the following:
•Elimination of deposits for new residential customers;
•Updates to the Oregon low-income energy efficiency program; and
•Recovery of the COVID-19 deferral over two years starting November 1, 2022.

On August 19, 2022, NW Natural, the OPUC Staff, Oregon CUB, and AWEC, which comprise some of the parties to the Rate Case, filed a third stipulation with the OPUC addressing the amortization period, interest accrual rate, and certain proposed tax adjustments related to NW Natural’s Lexington renewable natural gas (RNG) project (Third Stipulation and together with the First Stipulation and Second Stipulation, the Rate Case Stipulations).

On October 24, 2022, the OPUC issued an order approving the Rate Case Stipulations. After adjustments provided in the order and compliance with the First Stipulation, the order increased the revenue requirement by $59.4 million, and included a rate base of $1.76 billion, or an increase of $320 million since the last rate case. The OPUC also ordered an adjustment to NW Natural’s current line extension allowance methodology to a five times margin approach (which for an average residential customer is currently approximately $2,300), declining to four times margin on November 1, 2023, and three times margin on November 1, 2024. The OPUC further ordered that the costs NW Natural sought to recover related to its Lexington RNG project were reasonable and prudently incurred under Senate Bill 98 and adopted an automatic adjustment clause that allows for NW Natural's RNG project costs to be added to rates annually on November 1st, with a mechanism for NW Natural to defer the difference between forecasted and actual RNG costs, subject to an earnings test that includes deadbands at 50 basis points below and above NW Natural's authorized ROE.

New rates authorized by the OPUC order were effective November 1, 2022.

From November 1, 2020 through October 31, 2022, the OPUC authorized rates to customers based on an ROE of 9.4% and a cost of capital of 6.965% with a capital structure of 50% common equity and 50% long-term debt. The OPUC also authorized NW Natural to recover the expense associated with the Oregon Corporate Activity Tax (CAT) as a component of base rates. See "*Corporate Activity Tax*" in the 2021 Form 10-K. In addition, the OPUC approved the application of NW Natural's decoupling calculation for the months of November and May to the month of April. The decoupling mechanism is intended to encourage customers to conserve energy without adversely affecting earnings due to reductions in sales volumes.

WASHINGTON. On October 21, 2021, the WUTC issued an order concluding NW Natural's general rate case filed in December 2020 (WUTC Order). The WUTC Order provides for an annual revenue requirement increase over two years, consisting of a 6.4% or $5.0 million increase in the first year beginning November 1, 2021 (Year One), and up to a 3.5% or $3.0 million increase in the second year beginning November 1, 2022 (Year Two). The increase is based on the following assumptions:

- Cost of capital of 6.814%; and
- Average rate base of $194.7 million, an increase of $20.9 million since the last rate case for capital expenditures already expended at the time of filing, with an additional expected $31.2 million increase in Year One, and an additional expected $21.4 million increase in Year Two, with the increases in Year One and Year Two relating to expected capital expenditures in those years.

The WUTC Order does not specify the underlying inputs to the cost of capital, including capital structure and return on equity. New rates authorized by the WUTC Order were effective November 1, 2021.

From November 1, 2019 through October 31, 2021, the WUTC authorized rates to customers based on an ROE of 9.4% and an overall rate of return of 7.161% with a capital structure of 50.0% long-term debt, 1.0% short-term debt, and 49.0% common equity. The WUTC also authorized the recovery of environmental remediation expenses allocable to Washington customers through an Environmental Cost Recovery Mechanism (ECRM) and directed NW Natural to provide federal tax reform benefits to customers. See "Rate Mechanisms - Environmental Cost Deferral and Recovery - *Washington ECRM*" below.

FERC. NW Natural is required under its Mist interstate storage certificate authority and rate approval orders to file every five years either a petition for rate approval or a cost and revenue study to change or justify maintaining the existing rates for its interstate storage services. On October 12, 2018, NW Natural filed a rate petition with FERC for revised cost-based maximum rates, which incorporated the new federal corporate income tax rate. The revised rates were effective beginning November 1, 2018.

NW Natural continuously evaluates the need for rate cases in its jurisdictions.

<u>Rate Mechanisms</u>
During 2022 and 2021, NW Natural's key approved rates and recovery mechanisms for each service area included:

	Oregon		Washington	
	2020 Rate Case (effective 11/1/2020)	2022 Rate Case (effective 11/1/2022)	2019 Rate Case (effective 11/1/2019)	2021 Rate Case (effective 11/1/2021)
Authorized Rate Structure:				
Return on Equity	9.4%	9.4%	9.4%	**
Rate of Return	7.0%	6.8%	7.2%	6.8%
Debt/Equity Ratio	50%/50%	50%/50%	51%/49%	**
Key Regulatory Mechanisms:				
Purchased Gas Adjustment (PGA)	X	X	X	X
Gas Cost Incentive Sharing	X	X		
Decoupling	X	X		
Weather Normalization (WARM)	X	X		
Environmental Cost Recovery	X	X	X	X
Interstate Storage and Asset Management Sharing	X	X	X	X

** The WUTC Order does not specify the underlying inputs to the cost of capital, including capital structure and return on equity.

PURCHASED GAS ADJUSTMENT. Rate changes are established for NW Natural each year under PGA mechanisms in Oregon and Washington to reflect changes in the expected cost of natural gas commodity purchases. The PGA filings include gas costs under spot purchases as well as contract supplies, gas cost hedges, gas costs from the withdrawal of storage inventories, the production of gas reserves, interstate pipeline demand costs, temporary rate adjustments, which amortize balances of deferred regulatory accounts, and the removal of temporary rate adjustments effective for the previous year.

Each year, NW Natural hedges gas prices on a portion of NW Natural's annual sales requirement based on normal weather, including both physical and financial hedges. As of September 30, 2022, NW Natural's forecasted sales volume was hedged at approximately 80% in total for the 2022-23 gas year. The total hedged for Oregon was also approximately 80%, including 63% in financial hedges and 17% in physical gas supplies. The total hedged for Washington was approximately 79%, including 66% in financial hedges and 13% in physical gas supplies. During 2021 and 2022, there was increased volatility and pricing in the current and forward gas markets. In response to higher than normal volatility in forward gas markets in 2022, we are planning to hedge at higher levels for the 2022-23 gas year. In 2021, NW Natural increased its hedging level for the 2021-22 PGA year in Oregon to 82% compared to 74% in the 2020-21 PGA year.

NW Natural is also hedged between 20% and 80% for annual requirements over the subsequent three gas years, which consists of between 23% and 80% in Oregon and between 0% and 79% in Washington. Hedge levels are subject to change based on actual load volumes, which depend to a certain extent on weather, economic conditions, and estimated gas reserve production. Also, gas storage inventory levels may increase or decrease with storage expansion, changes in storage contracts with third parties, variations in the heat content of the gas, and/or storage recall by NW Natural. As the Company plans for the 2022-23 gas year, gas price volatility has remained high with current and forward gas prices increasing substantially in 2022. We will continue to monitor gas prices as we begin to fill storage and look at hedging plans for future gas years. Gas purchases and hedges entered into for the coming winter are included in the Company’s PGA filings in Oregon and Washington.

In September 2022, NW Natural filed its annual PGA and received OPUC and WUTC approval in October 2022.
Included in the 2022-23 PGA, the OPUC and WUTC approved a new temporary bill credit for NW Natural’s residential customers, beginning November 1, 2022. As a result, NW Natural will defer some of the rate impact to warmer months when customers typically see lower bills. PGA rate changes were effective November 1, 2022. Rates may vary between states due to different rate structures, rate mechanisms and hedging policies.

Under the current PGA mechanism in Oregon, there is an incentive sharing provision whereby NW Natural is required to select each year an 80% deferral or a 90% deferral of higher or lower actual gas costs compared to estimated PGA prices, such that the impact on NW Natural's current earnings from the incentive sharing is either 20% or 10% of the difference between actual and estimated gas costs, respectively. For the 2022-23 and 2021-22 gas years, NW Natural selected the 90% deferral option. Under the Washington PGA mechanism, NW Natural defers 100% of the higher or lower actual gas costs, and those gas cost differences are passed on to customers through the annual PGA rate adjustment.

EARNINGS TEST REVIEW. NW Natural is subject to an annual earnings review in Oregon to determine if the NGD business is earning above its authorized ROE threshold. If NGD business earnings exceed a specific ROE level, then 33% of the amount above that level is required to be deferred or refunded to customers. Under this provision, if NW Natural selects the 80% deferral gas cost option, then NW Natural retains all earnings up to 150 basis points above the currently authorized ROE. If NW Natural selects the 90% deferral option, then it retains all earnings up to 100 basis points above the currently authorized ROE. For the

2020-21 and 2021-22 gas years, NW Natural selected the 90% deferral option. The ROE threshold is subject to adjustment annually based on movements in long-term interest rates. For calendar year 2021, the ROE threshold was 10.40%. NW Natural filed the 2021 earnings test in April 2022 indicating no customer refund adjustment, and the filing was approved in July 2022. NW Natural does not expect a customer refund adjustment for 2022 based on results.

GAS RESERVES. In 2011, the OPUC approved the Encana gas reserves transaction to provide long-term gas price protection for NGD business customers and determined costs under the agreement would be recovered on an ongoing basis through the annual PGA mechanism. Gas produced from NW Natural's interests is sold at then prevailing market prices, and revenues from such sales, net of associated operating and production costs and amortization, are included in cost of gas. The cost of gas, including a carrying cost for the rate base investment made under the original agreement, is included in NW Natural's annual Oregon PGA filing, which allows NW Natural to recover these costs through customer rates. The net investment under the original agreement earns a rate of return.

In 2014, NW Natural amended the original gas reserves agreement in response to Encana's sale of its interest in the Jonah field located in Wyoming to Jonah Energy. Under the amended agreement with Jonah Energy, NW Natural has the option to invest in additional wells on a well-by-well basis with drilling costs and resulting gas volumes shared at the amended proportionate working interest for each well in which NW Natural invests. Volumes produced from the additional wells drilled after the amended agreement are included in NW Natural's Oregon PGA at a fixed rate of $0.4725 per therm. NW Natural has not participated in additional wells since 2014.

DECOUPLING. In Oregon, NW Natural has a decoupling mechanism. Decoupling is intended to break the link between earnings and the quantity of gas consumed by customers, removing any financial incentive to discourage customers’ efforts to conserve energy. The Oregon decoupling baseline usage per customer was reset in the 2020 Oregon general rate case. The Order in the 2020 Oregon general rate case also approved extending NW Natural’s decoupling calculation for the months of November and May to the month of April. This mechanism employs a use-per-customer decoupling calculation, which adjusts margin revenues to account for the difference between actual and expected customer volumes. The margin adjustment resulting from differences between actual and expected volumes under the decoupling component is recorded to a deferral account, which is included in the annual PGA filing.

WARM. In Oregon, NW Natural has an approved weather normalization mechanism (WARM), which is applied to residential and small commercial customer bills. This mechanism is designed to help stabilize the collection of fixed costs by adjusting residential and small commercial customer billings based on temperature variances from average weather, with rate decreases when the weather is colder than average and rate increases when the weather is warmer than average. The mechanism is applied to bills from December through mid-May of each heating season. The mechanism adjusts the margin component of customers’ rates to reflect average weather, which uses the 25-year average temperature for each day of the billing period. Daily average temperatures and 25-year average temperatures are based on a set point temperature of 59 degrees Fahrenheit for residential customers and 58 degrees Fahrenheit for commercial customers. The collections of any unbilled WARM amounts due to tariff caps and floors are deferred and earn a carrying charge until collected, or returned, in the PGA the following year. Residential and small commercial customers in Oregon are allowed to opt out of the weather normalization mechanism, and as of September 30, 2022, 7% of total eligible customers had opted out. NW Natural does not have a weather normalization mechanism approved for Washington customers, which account for about 12% of total customers. See "Business Segment—*Natural Gas Distribution"* below.

INDUSTRIAL TARIFFS. The OPUC and WUTC have approved tariffs covering NGD service to major industrial customers, which are intended to give NW Natural certainty in the level of gas supplies needed to serve this customer group. The approved terms include, among other things, an annual election period, special pricing provisions for out-of-cycle changes, and a requirement that industrial customers complete the term of their service election under NW Natural's annual PGA tariff.

ENVIRONMENTAL COST DEFERRAL AND RECOVERY. NW Natural has authorizations in Oregon and Washington to defer costs related to remediation of properties that are owned or were previously owned by NW Natural. In Oregon, a Site Remediation and Recovery Mechanism (SRRM) is currently in place to recover prudently incurred costs allocable to Oregon customers, subject to an earnings test. Effective beginning November 1, 2019, the WUTC authorized an Environmental Cost Recovery Mechanism (ECRM) for recovery of prudently incurred costs allocable to Washington customers.

Oregon SRRM

Under the Oregon SRRM collection process there are three types of deferred environmental remediation expense:

- Pre-review - This class of costs represents remediation spend that has not yet been deemed prudent by the OPUC. Carrying costs on these remediation expenses are recorded at NW Natural's authorized cost of capital. NW Natural anticipates the prudence review for annual costs and approval of the earnings test prescribed by the OPUC to occur by the third quarter of the following year.
- Post-review - This class of costs represents remediation spend that has been deemed prudent and allowed after applying the earnings test, but is not yet included in amortization. NW Natural earns a carrying cost on these amounts at a rate equal to the five-year treasury rate plus 100 basis points.

- Amortization - This class of costs represents amounts included in current customer rates for collection and is calculated as one-fifth of the post-review deferred balance. NW Natural earns a carrying cost equal to the amortization rate determined annually by the OPUC, which approximates a short-term borrowing rate. NW Natural included $6.3 million and $4.2 million of deferred remediation expense approved by the OPUC for collection during the 2021-22 and 2020-21 PGA years, respectively.

In addition, the SRRM also provides for the annual collection of $5.0 million from Oregon customers through a tariff rider. As it collects amounts from customers, NW Natural recognizes these collections as revenue net of any earnings test adjustments and separately amortizes an equal and offsetting amount of the deferred regulatory asset balance through the environmental remediation operating expense line shown separately in the operating expenses section of the Consolidated Statements of Comprehensive Income (Loss). For additional information, see Note 17 in the 2021 Form 10-K.

The SRRM earnings test is an annual review of adjusted NGD ROE compared to authorized NGD ROE. To apply the earnings test NW Natural must first determine what if any costs are subject to the test through the following calculation:

Annual spend
Less: $5.0 million base rate rider
Prior year carry-over(1)
$5.0 million insurance + interest on insurance
Total deferred annual spend subject to earnings test
Less: over-earnings adjustment, if any
Add: deferred interest on annual spend(2)
Total amount transferred to post-review

(1) Prior year carry-over results when the prior year amount transferred to post-review is negative. The negative amount is carried over to offset annual spend in the following year.
(2) Deferred interest is added to annual spend to the extent the spend is recoverable.

To the extent the NGD business earns at or below its authorized ROE as defined in the SRRM, the total amount transferred to post-review is recoverable through the SRRM. To the extent more than authorized ROE is earned in a year, the amount transferred to post-review would be reduced by those earnings that exceed its authorized ROE.

NW Natural concluded there was no earnings test adjustment for 2021 based on the environmental earnings test that was submitted in April 2022.

Washington ECRM

The ECRM established by the WUTC order effective November 1, 2019 permits NW Natural’s recovery of environmental remediation expenses allocable to Washington customers. These expenses represent 3.32% of costs associated with remediation of sites that historically served both Oregon and Washington customers. The order allows for recovery of past deferred and future prudently incurred remediation costs allocable to Washington through application of insurance proceeds and collections from customers. Prudently incurred costs that were deferred from the initial deferral authorization in February 2011 through June 2019 were fully offset with insurance proceeds, with any remaining insurance proceeds to be amortized over a 10.5 year period. On an annual basis NW Natural will file for a prudence determination and a request to recover remediation expenditures in excess of insurance amortizations in the following year's customer rates. After insurance proceeds are fully amortized, if in a particular year the request to collect deferred amounts exceeds one percent of Washington normalized revenues, then the excess will be collected over three years with interest.

INTERSTATE STORAGE AND ASSET MANAGEMENT SHARING. On an annual basis, NW Natural credits amounts to Oregon and Washington customers as part of a regulatory incentive sharing mechanism related to net revenues earned from Mist gas storage and asset management activities. Previously, amounts were credited to Oregon customers in June. Starting in 2021, Oregon customers received this credit in February per the 2020 Oregon rate case order. Credits are given to customers in Washington as reductions in rates through the annual PGA filing in November.

During the first quarter of 2022, NW Natural refunded an interstate storage and asset management sharing credit of approximately $41.1 million to Oregon customers over three equal installments in January, February and March. This includes revenue generated for the November 2020 through October 2021 PGA year. A majority of this revenue is from the cold weather event in February 2021 disclosed above. Credits are given to customers in Washington as reductions in rates through the annual PGA filing in November. Credits to Oregon and Washington customers in 2021 were approximately $9.1 million and $3.1 million, respectively.

Regulatory Proceeding Updates

During 2022, NW Natural was involved in the regulatory activities discussed below. For additional information, see Part II, Item 7 "Results of Operations—*Regulatory Matters"* in the 2021 Form 10-K.

COVID-19 DEFERRAL DOCKETS. During 2020, Oregon and Washington approved our applications to defer certain COVID-19 related costs. Costs that may be recoverable include, but are not limited to, the following: personal protective equipment, cleaning supplies and services, bad debt expense, financing costs to secure liquidity, and certain lost revenue, net of offsetting direct expense reductions associated with COVID-19. As of September 30, 2022, we believe that approximately $18.9 million of the financial effects related to COVID-19 are recoverable and deferred to a regulatory asset approximately $15.1 million for incurred costs. In addition, we expect to recognize revenue in a future period for an additional $3.8 million related to forgone late fee revenue. As part of the 2022 Oregon general rate case, we received approval from the OPUC to recover the 2020 and 2021 COVID-19 deferral totaling $10.9 million over two years starting November 1, 2022.

The following table outlines some of the key items approved by the respective Commissions:

	Oregon	Washington
Reinstituting Disconnections for Nonpayment:		
Residential	August 1, 2021	September 30, 2021
Small Commercial	December 1, 2020	September 30, 2021
Large Commercial/Industrial	November 3, 2020	October 20, 2020
Resuming Residential Reconnection Fee Charges	October 1, 2022	**
Reinstituting Late Fees for Nonpayment:		
Residential	October 1, 2022	**
Small Commercial	December 1, 2020	**
Large Commercial/Industrial	November 3, 2020	October 20, 2020
Arrearage Management Program	1.5% of Retail Revenues	1% of Retail Revenues

** Date is pending a Commission review of its existing credit and collection practices that is expected to be completed over the next year.

ARREARAGE MANAGEMENT PROGRAMS. As part of the approved term sheets, NW Natural established programs in Oregon and Washington to identify and mitigate residential customer arrearages associated with COVID-19. Under the Washington program, income-eligible customers may receive up to $2,500 per year. In March 2022, the Oregon program was expanded to include additional funding and a low-income focus. Under the Oregon program, NW Natural can provide a one-time grant of up to $1,600 per eligible residential customer. AMP is funded by NW Natural with recovery facilitated through the COVID-19 deferral dockets. As of September 30, 2022, the amount granted and deferred to a regulatory asset related to AMP was $9.4 million of the total funds available of $9.9 million. The programs in both Oregon and Washington are now closed.

LOW INCOME DISCOUNT TARIFF. In July 2022, NW Natural received approval from the OPUC for an income-qualifying residential bill discount program. The income threshold for program participation is at or below 60 percent of Oregon state median income (SMI). The program provides a bill discount for income-qualifying residential customers at four discount tier levels based on household income compared to SMI, with higher discounts given for lower income levels. Participating customers can self-certify their income and household size to qualify for the program directly with NW Natural or their local Community Action Agency. The program was available for qualifying customers starting November 1, 2022. Costs for the bill discount program include simultaneous recovery from all customers. Start-up and administrative costs of the program are authorized to be deferred for later inclusion in rates.

	Total Household Income	Bill Discount Percentage
Tier 0	At or below 15% SMI	40%
Tier 1	16% - 30% of SMI	25%
Tier 2	31% - 45% of SMI	20%
Tier 3	46% - 60% of SMI	15%

RENEWABLE NATURAL GAS. On June 19, 2019, the Oregon legislature passed Senate Bill 98 (SB 98), which enables natural gas utilities to procure or develop RNG on behalf of their Oregon customers. The bill was signed into law by the governor in July 2019, and subsequently, the OPUC opened a docket in August 2019 regarding the rules for the bill. After working with parties, the OPUC adopted final rules in July 2020.

SB 98 and the rules outline the following parameters for the RNG program including: setting voluntary goals for adding as much as 30% RNG into the state’s pipeline system by 2050; enabling gas utilities to invest in and own the cleaning and conditioning equipment required to bring raw biogas and landfill gas up to pipeline quality, as well as the facilities to connect to the local gas distribution system; and allowing up to 5% of a utility’s revenue requirement to be used to cover the incremental cost or investment in renewable natural gas infrastructure.

Further, the new law supports all forms of renewable natural gas including renewable hydrogen, which is made from excess wind, solar and hydro power. Renewable hydrogen can be used for the transportation system, industrial use or blended into the natural gas pipeline system.

Pursuant to the 2022 Oregon general rate case, the OPUC ordered that the costs NW Natural sought to recover related to its investment in Lexington Renewables Energy, LLC were reasonable and prudently incurred under SB 98. Furthermore, the OPUC approved an automatic adjustment clause that allows for NW Natural's RNG project costs to be added to rates annually on November 1st, with a mechanism for NW Natural to defer the difference between the forecasted and actual RNG costs, subject to an earnings test that includes deadbands at 50 basis points below and above NW Natural's authorized ROE.

WATER UTILITIES. NW Natural Water currently serves over 150,000 people through approximately 61,000 connections across five states.

Water Acquisitions
NWN Water closed the following acquisitions during 2022:
•Belle Oaks Water and Sewer Co., Inc was acquired by NWN Water of Texas in May 2022
•NWN Water increased its ownership stake in Avion Water Company to 40.3% in July 2022
•Northwest Water Services, LLC was acquired by NWN Water of Washington in August 2022
•Aquarius Utilities, LLC was acquired by NWN Water of Washington in August 2022
•Far West Water & Sewer, Inc. was acquired by NWN Water in October 2022

In the first quarter of 2022, NWN Water signed two additional purchase agreements for water utilities, representing approximately 900 connections in Texas also near its existing Blue Topaz Utilities. Applications for approval of these purchase agreements were filed in the first quarter of 2022 with the PUCT and decisions are expected in late 2022 or 2023.

Water General Rate Cases
For our acquired water utilities, we have been executing general rate cases. In February 2022, the OPUC adopted a comprehensive stipulation in Sunriver Water's rate case with new rates effective May 2022. In January 2022, we filed a general rate case for Suncadia Water and the WUTC allowed rates to go into effect in May 2022 by operation of law. In June 2022, Avion Water Company filed a general rate case with the OPUC; and in July 2022, Gem State Water Company filed a general rate case with the IPUC. Decisions in both cases are expected in the first half of 2023.

INTEGRATED RESOURCE PLAN (IRP). NW Natural generally files a full IRP biennially for Oregon and Washington with the OPUC and WUTC, respectively. NW Natural jointly filed its 2022 IRP for both Oregon and Washington on September 23, 2022. The 2022 IRP outlines scenarios of future requirements based on a range of outcomes that would provide the least-cost resources to meet future demand. In our most recent filing, we included certain demand and supply side projects that we included in our action plan which will be evaluated by the OPUC and WUTC. NW Natural anticipates that approval from both the OPUC and WUTC will come in either the second or third quarter of 2023.

PIPELINE SECURITY. In May and July 2021, the Department of Homeland Security's (DHS) Transportation Security Administration (TSA) released two security directives applicable to certain notified owners and operators of natural gas pipeline facilities (including local distribution companies) that TSA has determined to be critical. The first security directive required notified owners/operators to implement cybersecurity incident reporting to the DHS, designate a cybersecurity coordinator, and perform a gap assessment of current entity cybersecurity practices against certain voluntary TSA security guidelines and report relevant results and proposed mitigation to applicable DHS agencies. The second security directive requires notified entities to implement a significant number of specified cyber security controls and processes. The TSA recently released a third security directive, which replaces the second directive. The third security directive provides a framework based on risk and outcome objectives and is effective until July 2023. NW Natural is currently in the process of evaluating and implementing the security directives while ensuring safe and reliable operations. NW Natural is providing frequent updates to the TSA on NW Natural's progress on achieving the security directives. NW Natural filed requests with the OPUC and WUTC to defer the costs associated with complying with the second security directive and plans to seek recovery of these costs in future ratemaking proceedings. As of September 30, 2022, NW Natural has deferred to a regulatory asset $5.0 million of costs incurred and $31.3 million was invested in information technology to date. NW Natural continues to evaluate the potential effect of these directives on our operations and facilities, as well as the potential total cost of implementation, and will continue to monitor for any clarifications or amendments to these directives.

ERP UPGRADE DEFERRALS. In the fourth quarter of 2020, NW Natural filed requests to defer expenses pertaining to a project to upgrade the existing enterprise resource planning (ERP) system with the OPUC and WUTC. A stipulation supported by all parties in the Oregon docket was filed and approved by the OPUC in the third quarter of 2021. Under the settlement agreement, NW Natural can recover 100% of costs incurred up to the $8.55 million estimate of Oregon-allocated costs provided in the docket. For costs that exceed $8.55 million up to $12 million, 80% may be recovered from customers. For costs that exceed $12 million, 50% may be recovered. Approval of the Washington deferral was resolved as part of the most recent general rate case. As of September 30, 2022, NW Natural deferred to a regulatory asset $8.6 million of expenses incurred to date. NW Natural placed its new ERP system into service in September 2022.

INFLATION REDUCTION ACT. The Inflation Reduction Act of 2022 (IRA) was signed into law in August 2022 and includes a number of energy related provisions. The IRA includes new or enhanced incentives for renewable and clean energy, carbon capture, energy storage, alternative transportation fuels, residential energy efficiency, and manufacturing of advanced energy projects. The renewable and clean energy incentives include support for renewable natural gas, hydrogen, wind, solar, nuclear, and geothermal. The residential energy efficiency incentives include tax credits for high efficiency water heating and heating powered by electricity, natural gas, propane, or oil, as well as federal Department of Energy grants to states and tribes for rebates for electric appliances, insulation, and upgraded electric panels that provide the greatest benefit to families earning less than 80 percent of the median family income. The incentive credits for energy production are scaled and increase when the investments meet prevailing wage, apprenticeship, domestic content, or certain location requirements. These incentives are generally in the form of income tax credits limited in their use to a taxpayer’s federal tax liability, but in certain circumstances they may be monetized through a sale to unrelated parties or be refundable through a new direct pay election.

The IRA also includes funding for the Environmental Protection Agency (EPA) to improve greenhouse gas (GHG) reporting and enforcement, imposes a methane charge associated with excess emissions from petroleum and natural gas production, processing, transmission, and storage, creates a new corporate alternative minimum tax of 15 percent that applies to corporations with average annual financial statement income in excess of one billion dollars, and creates a new 1 percent excise tax on the net stock repurchases by public companies.

Environmental, Legislation and Regulation Matters

There is a growing international and domestic focus on climate change and the contribution of GHG emissions, most notably methane and carbon dioxide, to climate change. In response, there are increasing efforts at the international, federal, state, and local level to regulate GHG emissions. Legislation or other forms of regulation could take a variety of forms including, but not limited to, GHG emissions limits, reporting requirements, carbon taxes, requirements to purchase carbon credits, building codes, increased efficiency standards, additional charges to fund energy efficiency activities or other regulatory actions, incentives or mandates to conserve energy, or use renewable energy sources, tax advantages and other subsidies to support alternative energy sources, a reduction in rate recovery for construction costs related to the installation of new customer services or other new infrastructure investments, mandates for the use of specific fuels or technologies, or promotion of research into new technologies to reduce the cost and increase the scalability of alternative energy sources. These efforts could include legislation, legislative proposals, or new regulations at the federal, state, and local level, as well as private party litigation related to GHG emissions. We recognize certain of our businesses, including our natural gas business, are likely to be affected by current or future regulation seeking to limit GHG emissions.

International

In early 2021, the U.S. rejoined the Paris Agreement on Climate, which establishes non-binding targets to reduce GHG emissions from both developed and developing nations. Under the Paris Agreement, signatory countries are expected to submit their nationally determined contributions to curb GHG emissions and meet the agreed temperature objectives every five years. On April 22, 2021, the United States federal administration announced the U.S. nationally determined contribution to achieve a fifty to fifty-two percent reduction from 2005 levels in economy-wide net GHG emissions by 2030.

Federal

President Biden’s administration has issued executive orders directing agencies to conduct a general review of regulations and executive actions related to the environment and reestablished a framework for considering the social cost of carbon as part of certain agency cost-benefit analyses for new regulations. President Biden’s administration continues to consider a wide range of additional policies, executive orders, rules, legislation, and other initiatives to address climate change.

The IRA was signed into law in August 2022 and includes several climate and energy provisions. We expect that over a ten year period, the IRA will provide approximately $415 billion of funding through grants, tax credits, and investments to support initiatives including manufacturing, renewable energy production and consumption, transportation electrification and climate-smart agriculture. The IRA includes tax credits for RNG, hydrogen and carbon capture projects, among other investments. The IRA also includes funding for the EPA to improve GHG reporting and enforcement, as well as a methane fee applicable to activities associated with gas production and processing facilities, transmission pipelines and certain storage facilities. We are assessing effects of the IRA relevant to our businesses, and will continue to do so as it is implemented. The U.S. Congress may also pass federal climate change legislation in the future. We cannot predict when or if Congress will pass such legislation and in what form.

In addition, the EPA regulates GHG emissions pursuant to the Clean Air Act. For example, the EPA requires the annual reporting of greenhouse gas emissions from certain industries, specified emission sources, and facilities. Under this reporting rule, local natural gas distribution companies like NW Natural are required to report system throughput to the EPA on an annual basis. The EPA also has required additional GHG reporting regulations to which NW Natural is subject, requiring the annual reporting of fugitive emissions from operations. Other federal regulatory agencies, including the U.S. Department of Energy and Federal Energy Regulatory Commission, are beginning to address greenhouse gas emissions through changes in their regulatory oversight approach, policies and rules.

Additionally, in March 2022, the Securities and Exchange Commission (SEC) proposed new rules relating to the disclosure of a range of climate-related matters. These include corporate governance and risk management, disaggregated financial disclosure in the notes to audited financial statements, and detailed disclosure concerning GHG emissions. We are currently assessing these proposed rules. We cannot predict what any final rules adopted by the SEC may require, nor can we predict the time periods for compliance, the costs of implementation, or any potential impacts resulting from any final climate-related rules that may be adopted. To the extent these rules are finalized as proposed or in modified form, we or our customers could incur increased costs related to the assessment and disclosure of climate-related risks. These could include internal costs as well as external costs such as the cost of independent experts to provide attestation reports on our GHG emissions data and increased audit costs.

Washington State

In 2021, Washington comprised approximately 11% of NW Natural's revenues, as well as 1.5% and 25.5% of new meters from commercial and residential customers, respectively. Effective February 1, 2021, building codes in Washington state require new residential homes to achieve higher levels of energy efficiency based on specified carbon emissions assumptions, which calculate electric appliances to have lower on-site GHG emissions than comparable gas appliances. This increases the cost of new home construction incorporating natural gas depending on a number of factors including home size, equipment configurations, and building envelope measures. Additionally, the Washington State Building Code Council (SBCC) voted in April 2022 to include updates in the state commercial building energy code that are expected to restrict or eliminate the use of gas space and water heating in new commercial construction. In early November, the SBCC voted to include updates to the state residential building energy code that are expected to restrict the use of gas space and water heating in residential construction, with certain exceptions including for natural gas-fired heat pumps and hybrid fuel systems. If final actions expected in late November occur, the SBBC commercial and residential rules are expected to become effective July 1, 2023. Utilities and other organizations, including NW Natural, are reviewing the proposed building energy code updates, the process by which the updates have been considered, and the legality of the building code updates. We currently expect that the building code changes will be subject to legal challenge if they become final.

Washington has also enacted the Climate Commitment Act (CCA), which establishes a comprehensive program that includes an overall limit for GHG emissions from major sources in the state that declines yearly beginning on January 1, 2023, resulting in an overall reduction of GHG emissions to 95% below 1990 levels by 2050. The Washington Department of Ecology has adopted rules to create a cap-and-invest program, under which entities, including natural gas and electric utilities, large manufacturing facilities, and transportation and other fuel providers, which are subject to the CCA must either reduce their emissions or obtain allowances and approved offset credits to cover any remaining emissions. NW Natural is subject to the CCA and intends to pursue inclusion of CCA compliance costs in rates.

NW Natural continues to work with policymakers and a coalition of utilities, labor groups and business coalitions in Washington to communicate the role of direct use natural gas, and in the coming years renewable natural gas and hydrogen, can play in pursuing more effective policies to reduce GHGs while preserving reliability, resiliency, energy choice, equity, and energy affordability.

Oregon

On March 10, 2020, the governor of Oregon issued an executive order (EO) establishing GHG emissions reduction goals of at least 45% below 1990 emission levels by 2035 and at least 80% below 1990 emission levels by 2050 and directed state agencies and commissions to facilitate such GHG emission goals targeting a variety of sources and industries. Although the EO does not specifically direct actions of natural gas distribution businesses, the OPUC is directed to prioritize proceedings and activities that advance decarbonization in the utility sector, mitigate the energy burden experienced by utility customers and ensure system reliability and resource adequacy. The EO also directs other state agencies, including the Oregon Department of Environmental Quality (ODEQ), to cap and reduce GHG emissions from transportation fuels and all other liquid and gaseous fuels, including natural gas, adopt building energy efficiency goals for new building construction, reduce methane gas emissions from landfills and food waste, and submit a proposal for adoption of state goals for carbon sequestration and storage by Oregon's forest, wetlands and agricultural lands. The OPUC is charged with carrying out the EO to the extent it is consistent with its statutory authority and duties, and in doing so to focus on equitable impacts to low-income customers.

In December 2021, the ODEQ concluded its rulemaking process and issued final cap and reduce rules for its Climate Protection Program (CPP), which became effective in January of 2022. The CPP outlines GHG emissions reduction goals of 50% by 2035 and 90% by 2050 from a 1990 baseline. The first three-year compliance period is 2022 through 2024. NW Natural is subject to the CPP, and pursuant to this rule, is required to make its first compliance filing in 2025. We intend to pursue inclusion of compliance costs for the CPP in rates. The CPP has been subject to legal challenge by a number of utilities, companies and organizations, including NW Natural.

NW Natural is also engaged in an OPUC Fact-Finding ("Fact-Finding Docket"), opened in response to the EO for the purpose of analyzing the potential natural gas utility bill impacts that may result from the ODEQ's CPP and to identify appropriate regulatory tools to mitigate potential customer impacts. The OPUC Staff has indicated that the ultimate goal of the Fact-Finding Docket is to inform future policy decisions and other key analyses to be considered in 2022, or thereafter, after the CPP is in place. We expect the Oregon Commission to issue a final report in the last half of 2022.

NW Natural is working with policymakers and a coalition of utilities in Oregon to help stakeholders understand the role direct use natural gas, and in the coming years renewable natural gas and hydrogen, can play in pursuing more effective policies to reduce greenhouse gases while preserving reliability, resiliency, energy choice, equity, and energy affordability.

Local Jurisdictions and Other Advocacy

In addition to legislative activities at the state level, ballot measures may be proposed by advocacy groups. Some local and county governments in the United States also have been proposing or passing renewable energy resolutions, restrictions, taxes, or fees with advocates seeking to accelerate climate action goals. A number of cities across the country, and several in our service territory are currently considering actions such as limitations or bans on the use of natural gas in new construction or otherwise. For example, in July 2022, the Eugene City Council passed several motions, including one directing the city manager to draft an ordinance that could prohibit the use of natural gas in low rise residential buildings beginning with permits submitted after June of 2023, to allow the Eugene City Council an opportunity to consider one or more draft ordinances or actions, and to hear further from the citizens of Eugene regarding such actions. NW Natural is actively engaged with such cities, local governments, and other advocates, including, among others the cities of Eugene and Milwaukie, Oregon, in our service territory and is working with these communities to help them understand the ways in which the natural gas system, and renewable fuels, can help them meet their decarbonization goals.

NW Natural Decarbonization Initiatives & Actions

Our customers are currently paying less for their natural gas today than they did 15 years ago. We expect that compliance with any form of regulation of GHG emissions, including the CPP in Oregon and CCA in Washington as well as voluntary actions under SB 98, will require additional resources and compliance tools. The developing and changing carbon credit markets and other compliance tool options, decades-long timeframes for compliance, likely changing and evolving laws and energy policy, and evolving technological advancements, all make it difficult to accurately predict long-term tools for and costs of compliance. While we have modeled our integrated resource planning, given recency of the adoption of the final CPP and CCA rules, our compliance obligations and expected costs are uncertain and subject to significant change over the nearly 30-year time horizon. It is our current expectation that costs associated with compliance generally would be recovered in rates and would result in an increase in the prices charged to customers. The CPP in Oregon is largely tied to the volume of natural gas consumed and as such, we currently expect that CPP cost impacts will be the lowest among residential customers because they generally consume less and highest among industrial customers that use significantly higher volumes of natural gas, with cost increases for commercial customers falling between residential and industrial customers. The projected customer bill impact of the CPP varies significantly based on forecasting assumptions related to permitted levels of rate recovery, available technologies and equipment, weather patterns and gas usage, customer growth or attrition, allocation of fixed costs among classes of customers, energy efficiency levels, availability, use and cost of renewables, feasibility of broad-scale hydrogen in the natural gas system, and a number of other assumptions used in the complex analysis of integrated resource planning.

We are not currently able to quantify the extent to which current and prospective building code changes, or declining line extension allowances provided in rates to cover construction costs for new services, will affect new meter additions, or to what extent carbon compliance costs included in rates will affect the competitiveness of our business and the demand for natural gas service. All of these developments could negatively affect our gas utility customer growth. However, at the same time natural gas utilities will be subject to GHG emissions regulation, we expect that other energy source providers will be subject to similar, or in some cases stricter or more rapid, compliance requirements that are likely to affect their cost and competitiveness relative to natural gas as well. For example, President Biden has announced his intention to have a carbon-free electricity sector by 2035, 15 years before the target date of the CCA or CCP. In June 2021, the State of Oregon enacted HB 2021, a clean electricity bill that requires the state’s two largest investor-owned electric utilities and retail electricity service suppliers to reduce GHG emissions associated with electricity sold to Oregon customers to 100 percent below baseline levels by 2040 with interim steps, including an 80 percent reduction by 2030 and 90 percent reduction by 2035. This bill does not replace the separate renewable portfolio standards previously established in Oregon, which sets requirements for how much of the electricity used in Oregon must come from renewable resources. In Washington, SB 5116, the Clean Energy Transformation Act, requires all electric utilities in Washington to transition to carbon-neutral electricity by 2030 and to 100 percent carbon-free electricity by 2045. We expect compliance with these and other laws will substantially increase the cost of energy for electric customers in our service territory. We are not able to determine at this time whether increased electricity costs will make natural gas use more or less competitive on a relative basis.

We expect these and other trends to drive innovation of, and demand for, technological developments and innovative new products that reduce GHG emissions. Research and development are occurring across the energy sector, including in the gas sector with work being conducted on gas-fired heat pumps, higher efficiency water and space heating appliances including hybrid systems, carbon capture utilization and storage developments, continued development of technologies related to RNG, and various forms of hydrogen for different applications, among others.

NW Natural continues to take proactive steps in seeking to reduce GHG emissions in our region and is proactively communicating with local, state, and federal governments and communities about those steps. NW Natural has been a leader among gas utilities in innovative programs. Notable programs have included a decoupling rate structure designed to weaken the link between earnings and gas consumption by customer adopted in 2007, and establishment of a voluntary Smart Energy carbon offset program for customers established in 2007, and removal of all known cast iron and bare steel to create one of the tightest and most modern distribution systems in the country. We continue to believe that NW Natural has an important role in providing affordable and equitable energy to the communities we serve. NW Natural is an important provider of energy to families and businesses in Oregon and southwest Washington. Natural gas sales to our residential and commercial customers account for approximately 6% of Oregon's GHG emissions according to data for recent years from the State of Oregon Department of Environmental Quality In-Boundary GHG Inventory. We intend to continue to provide this necessary energy to our communities with the goal of using our modern pipeline system to help the Pacific Northwest transition to a clean energy future.

In 2016, NW Natural initiated a multi-pronged, multi-year strategy to accelerate and deliver greater GHG emission reductions in the communities we serve. Key components of this strategy include customer energy efficiency, continued adoption of NW Natural's voluntary Smart Energy carbon offset program, and seeking to incorporate RNG and hydrogen into our gas supply. RNG is produced from organic materials including food, agricultural and forestry waste, wastewater, or landfills. We believe RNG has the potential to significantly reduce net GHG emissions because methane that would otherwise be released to the atmosphere can be captured from these organic materials as they decompose and then conditioned to pipeline quality and distributed into our existing system. In 2019, Oregon Senate Bill 98 (SB 98) was signed into law enabling NW Natural to procure RNG on behalf of customers and provided voluntary targets that would allow us to make qualified investments and purchase RNG from third parties.

Under SB 98, NW Natural is actively working to procure RNG supply for customers and increase the amount of RNG on our system and we also explore the development of renewable hydrogen through power to gas. To that end, in 2020 and 2021, NW Natural announced several agreements and investments to procure RNG for its customers. For example, NW Natural began a partnership with BioCarbN to invest up to an estimated $38 million in four separate RNG development projects that will access biogas derived from water treatment at Tyson Foods' processing plants, subject to approval by all parties. The first project was commissioned in early 2022 with a second underway and planned to be commissioned in early 2023. To date, NW Natural has signed agreements with options to purchase or develop RNG for utility customers totaling about 3% of NW Natural's annual sales volume in Oregon.

FINANCIAL CONDITION

Capital Structure

NW Holdings' long-term goal is to maintain a strong and balanced consolidated capital structure. NW Natural targets a regulatory capital structure of 50% common equity and 50% long-term debt, which is consistent with approved regulatory allocations in Oregon, which has an allocation of 50% common equity and 50% long-term debt without recognition of short-term debt, and Washington, which has an allocation of 50% long-term debt, 1% short-term debt, and 49% common equity.

When additional capital is required, debt or equity securities are issued depending on both the target capital structure and market conditions. These sources of capital are also used to fund long-term debt retirements and short-term commercial paper maturities. See "Liquidity and Capital Resources" below and Note 9. Achieving our target capital structure and maintaining sufficient liquidity to meet operating requirements is necessary to maintain attractive credit ratings and provide access to the capital markets at reasonable costs.

NW Holdings' consolidated capital structure, excluding short-term debt, was as follows:

	September 30,		December 31,
	2022	2021	2021
Common equity	45.6 %	49.3 %	47.2 %
Long-term debt (including current maturities)	54.4	50.7	52.8
Total	100.0 %	100.0 %	100.0 %

NW Natural's consolidated capital structure, excluding short-term debt, was as follows:

	September 30,		December 31,
	2022	2021	2021
Common equity	50.6 %	49.3 %	49.8 %
Long-term debt (including current maturities)	49.4	50.7	50.2
Total	100.0 %	100.0 %	100.0 %

Including short-term debt balances, as of September 30, 2022 and 2021, and December 31, 2021, NW Holdings' consolidated capital structure included common equity of 43.1%, 40.4% and 39.5%; long-term debt of 49.5%, 41.5% and 44.0%; and short-term debt including current maturities of long-term debt of 7.4%, 18.1% and 16.5%, respectively. As of September 30, 2022 and 2021, and December 31, 2021, NW Natural's consolidated capital structure included common equity of 49.4%, 40.5%, and 44.2%; long-term debt of 46.2%, 41.5% and 44.7%; and short-term debt including current maturities of long-term debt of 4.4%, 18.0%, and 11.1%, respectively.

Liquidity and Capital Resources
At September 30, 2022 and 2021, NW Holdings had approximately $108.6 million and $19.5 million, and NW Natural had approximately $11.4 million and $9.7 million of cash and cash equivalents, respectively. In order to maintain sufficient liquidity during periods when capital markets are volatile, NW Holdings and NW Natural may elect to maintain higher cash balances and add short-term borrowing capacity. NW Holdings and NW Natural may also pre-fund their respective capital expenditures when long-term fixed rate environments are attractive. NW Holdings and NW Natural expect to have ample liquidity in the form of cash on hand and from operations and available credit capacity under credit facilities to support funding needs.

NW Natural Holdings and NW Natural continue to monitor interest rates and financing options for all of its businesses. Interest rates have increased in 2022 resulting from actions taken by the U.S. Federal Reserve to increase short-term rates as inflation rates remain elevated. NW Natural recovers interest expense on its long-term debt through its authorized cost of capital and capital.

Equity Issuance
On April 1, 2022, NW Holdings issued and sold 2,875,000 shares of its common stock pursuant to a registration statement on Form S-3 and related prospectus supplement. NW Holdings received net offering proceeds, after deducting the underwriter's discounts and commissions and expenses payable by NW Holdings of approximately $138.6 million. The proceeds were used for general corporate purposes, including repayment of its short-term indebtedness and/or making equity contributions to NW Holdings' subsidiaries, NW Natural, NW Natural Water and NW Natural Renewables. Contributions to NW Natural, NW Natural Water and NW Natural Renewables are to be used for general corporate purposes. Of the contributions received by NW Natural, $130.0 million was used to repay its short-term indebtedness.

ATM Equity Program
In August 2021, NW Holdings initiated an at-the-market (ATM) equity program by entering into an equity distribution agreement under which NW Holdings may issue and sell from time to time shares of common stock, no par value, having an aggregate gross sales price of up to $200 million. NW Holdings is under no obligation to offer and sell common stock under the ATM equity program, which expires in August 2024. Any shares of common stock offered under the ATM equity program are registered on NW Holdings' universal shelf registration statement filed with the SEC. During the three months ended September 30, 2022, NW Holdings issued and sold 327,221 shares of common stock pursuant to the ATM equity program resulting in cash proceeds of $16.7 million, net of fees and commissions paid to agents of $0.3 million. During the nine months ended September 30, 2022, NW Holdings issued and sold 1,005,322 shares of common stock pursuant to the ATM equity program resulting in cash proceeds of $51.9 million, net of fees and commissions paid to agents of $1.0 million. As of September 30, 2022, NW Holdings had $129.2 million of equity available for issuance under the program. The ATM equity program was initiated to raise funds for general corporate purposes, including equity contributions to NW Holdings' subsidiaries, NW Natural and NW Natural Water. Contributions to NW Natural and NW Natural Water will be used for general corporate purposes.

NW Holdings
For NW Holdings, short-term liquidity is primarily provided by cash balances, dividends from its operating subsidiaries, in particular NW Natural, available cash from a multi-year credit facility, and short-term credit facilities. NW Holdings also has a universal shelf registration statement filed with the SEC for the issuance of debt and equity securities. NW Holdings long-term debt, if any, and equity issuances are primarily used to provide equity contributions to NW Holdings' operating subsidiaries for operating and capital expenditures and other corporate purposes. From 2022 through 2024, we estimate NW Holdings' and NW Natural's combined incremental capital needs to be in the range of $600 million to $700 million. NW Holdings borrowed a $100 million term loan in September 2022 and has issued more than $190 million of equity through October 2022. In September 2022, NW Natural received the proceeds from a $140 million private placement FMB and NW Natural Water borrowed a $50 million term loan. NW Holdings intends to use raised capital to support NW Natural, NW Natural Water, and NW Natural Renewables operating and capital expenditure programs. NW Holdings' issuance of securities is not subject to regulation by state public utility commissions, but the dividends from NW Natural to NW Holdings are subject to regulatory ring-fencing provisions. NW Holdings guarantees the debt of its wholly-owned subsidiary, NWN Water. See "*Long-Term Debt*" below for more information regarding NWN Water debt.

As part of the ring-fencing conditions agreed upon with the OPUC and WUTC in connection with the holding company reorganization, NW Natural may not pay dividends or make distributions to NW Holdings if NW Natural's credit ratings and common equity ratio, defined as the ratio of equity to long-term debt, fall below specified levels. If NW Natural's long-term secured credit ratings are below A- for S&P and A3 for Moody's, dividends may be issued so long as NW Natural's common equity ratio is 45% or more. If NW Natural's long term secured credit ratings are below BBB for S&P and Baa2 for Moody's, dividends may be issued so long as NW Natural's common equity ratio is 46% or more. Dividends may not be issued if NW Natural's long-term secured credit ratings are BB+ or below for S&P or Ba1 or below for Moody's, or if NW Natural's common equity ratio is below 44%, where the ratio is measured using common equity and long-term debt excluding imputed debt or debt-like lease obligations. In each case, common equity ratios are determined based on a preceding or projected 13-month average. In addition, there are certain OPUC notice requirements for dividends in excess of 5% of NW Natural's retained earnings.

Additionally, if NW Natural's common equity (excluding goodwill and equity associated with non-regulated assets), on a preceding or projected 13-month average basis, is less than 46% of NW Natural's capital structure, NW Natural is required to notify the OPUC, and if the common equity ratio falls below 44%, file a plan with the OPUC to restore its equity ratio to 44%. This condition is designed to ensure NW Natural continues to be adequately capitalized under the holding company structure. Under the WUTC order, the average common equity ratio must not exceed 56%.

At September 30, 2022, NW Natural satisfied the ring-fencing provisions described above.
Based on several factors, including current cash reserves, committed credit facilities, its ability to receive dividends from its operating subsidiaries, in particular NW Natural, and an expected ability to issue long-term debt and equity securities in the capital markets, NW Holdings believes its liquidity is sufficient to meet anticipated near-term cash requirements, including all contractual obligations, investing, and financing activities as discussed in "*Cash Flows"* below.

NW HOLDINGS DIVIDENDS. Quarterly dividends have been paid on common stock each year since NW Holdings' predecessor's stock was first issued to the public in 1951. Annual common stock dividend payments per share, adjusted for stock splits, have increased each year since 1956. The declarations and amount of future dividends to shareholders will depend upon earnings, cash flows, financial condition, NW Natural's ability to pay dividends to NW Holdings and other factors. The amount and timing of dividends payable on common stock is at the sole discretion of the NW Holdings Board of Directors.

NW Natural
For the NGD business segment, short-term borrowing requirements typically peak during colder winter months when the NGD business borrows money to cover the lag between natural gas purchases and bill collections from customers. Short-term liquidity for the NGD business is primarily provided by cash balances, internal cash flow from operations, proceeds from the sale of commercial paper notes, as well as available cash from multi-year credit facilities, short-term credit facilities, company-owned life insurance policies, the sale of long-term debt, and equity contributions from NW Holdings. NW Natural's long-term debt and contributions from NW Holdings are primarily used to finance NGD capital expenditures, refinance maturing debt, and provide temporary funding for other general corporate purposes of the NGD business.

Based on its current debt ratings (see "Credit Ratings" below), NW Natural has been able to issue commercial paper and long-term debt at attractive rates. In the event NW Natural is not able to issue new long-term debt due to adverse market conditions or other reasons, NW Natural expects that near-term liquidity needs can be met using internal cash flows, issuing commercial paper, receiving equity contributions from NW Holdings, or drawing upon a committed credit facility. NW Natural also has a universal shelf registration statement filed with the SEC for the issuance of secured and unsecured debt securities.

In the event NW Natural senior unsecured long-term debt ratings are downgraded, or outstanding derivative positions exceed a certain credit threshold, counterparties under derivative contracts could require NW Natural to post cash, a letter of credit, or other forms of collateral, which could expose NW Natural to additional cash requirements and may trigger increases in short-term borrowings while in a net loss position. NW Natural was not required to post collateral at September 30, 2022. See "*Credit Ratings*" below and Note 15.

Other items that may have a significant impact on NW Natural's liquidity and capital resources include NW Natural's pension contribution requirements and environmental expenditures. For additional information, see Part II, Item 7 "*Financial Condition*" in the 2021 Form 10-K.

Short-Term Debt
The primary source of short-term liquidity for NW Holdings is cash balances, dividends from its operating subsidiaries, in particular NW Natural, available cash from a multi-year credit facility, and short-term credit facilities it may enter into from time to time.

The primary source of short-term liquidity for NW Natural is from the sale of commercial paper, available cash from a multi-year credit facility, and short-term credit facilities it may enter into from time to time. In addition to issuing commercial paper or entering into bank loans to meet working capital requirements, including seasonal requirements to finance gas purchases and accounts receivable, short-term debt may also be used to temporarily fund capital requirements. For NW Natural, commercial paper and bank loans are periodically refinanced through the sale of long-term debt or equity contributions from NW Holdings. Commercial paper, when outstanding, is sold through two commercial banks under an issuing and paying agency agreement and is supported by one or more unsecured revolving credit facilities. See "*Credit Agreements*" below.

At September 30, 2022 and 2021, NW Holdings had short-term debt outstanding of $141.0 million and $399.5 million, respectively. At September 30, 2022 and 2021, NW Natural had short-term debt outstanding of $53.0 million and $370.5 million, respectively. NW Holdings' short-term debt at September 30, 2022 consisted of $88.0 million in revolving credit agreement loans at NW Holdings and $53.0 million of commercial paper outstanding at NW Natural. The weighted average interest rate on the revolving credit agreement at September 30, 2022 was 4.7% at NW Holdings. The weighted average interest rate of commercial paper at September 30, 2022 was 3.3% at NW Natural.

Credit Agreements
NW Holdings
At September 30, 2022, NW Holdings had a $200 million sustainability-linked credit agreement, with a feature that allows it to request increases in the total commitment amount, up to a maximum of $300 million. The maturity date of the agreement is November 3, 2026, with available extensions of commitments for two additional one-year periods, subject to lender approval.

All lenders under the NW Holdings credit agreement are major financial institutions with committed balances and investment grade credit ratings as of September 30, 2022 as follows:

In millions

Lender rating, by category		Loan Commitment
AA/Aa	$	200
Total	$	200

Based on credit market conditions, it is possible one or more lending commitments could be unavailable to NW Holdings if the lender defaulted due to lack of funds or insolvency; however, NW Holdings does not believe this risk to be imminent due to the lenders' strong investment-grade credit ratings. At September 30, 2022, September 30, 2021 and December 31, 2021, $88.0 million, $29.0 million and $144.0 million were drawn under the NW Holdings Credit Agreement, respectively.

The NW Holdings credit agreement permits the issuance of letters of credit in an aggregate amount of up to $40 million. The principal amount of borrowings under the credit agreement is due and payable on the maturity date. The credit agreement requires NW Holdings to maintain a consolidated indebtedness to total capitalization ratio of 70% or less. Failure to comply with this covenant would entitle the lenders to terminate their lending commitments and accelerate the maturity of all amounts outstanding. NW Holdings was in compliance with this covenant at September 30, 2022 and 2021, with consolidated indebtedness to total capitalization ratios of 56.9% and 59.6%, respectively.

The NW Holdings credit agreement also requires NW Holdings to maintain debt ratings (which are defined by a formula using NW Natural's credit ratings in the event NW Holdings does not have a credit rating) with Standard & Poor's (S&P) and Moody's Investors Service, Inc. (Moody's) and notify the lenders of any change in its senior unsecured debt ratings or senior secured debt ratings, as applicable, by such rating agencies. A change in NW Holdings' debt ratings by S&P or Moody's is not an event of default, nor is the maintenance of a specific minimum level of debt rating a condition of drawing upon the credit agreement. Rather, interest rates on any loans outstanding under the credit agreements are tied to debt ratings and therefore, a change in the debt rating would increase or decrease the cost of any loans under the credit agreements when ratings are changed. NW Holdings does not currently maintain ratings with S&P or Moody's.

The NW Holdings credit agreement also includes a mechanism that can increase or decrease the undrawn interest rate by up to 1 basis point and undrawn interest rate by up to 5 basis points in accordance with NW Holdings' independently verified achievement of quantifiable metrics related to two goals—one related to carbon savings and one related to in-line inspections of NW Natural's transmission pipeline. Performance against these metrics is designed to be assessed annually with pricing adjustments, if any, resetting off of primary pricing annually and not cumulatively.

Interest charges on the NW Holdings credit agreement are indexed to the London Interbank Offered Rate (LIBOR). The agreement contains provisions addressing the end of the use of LIBOR as a benchmark rate of interest and a mechanism for determining an alternative benchmark rate of interest without an amendment to the credit agreement. If the provisions are triggered, LIBOR would be replaced by a secured overnight financing rate (SOFR)-based rate, if one can be determined, or, if not, LIBOR may be replaced by a rate selected by NW Holdings and the administrative agent under the agreement. The replacement rate is also subject to a spread adjustment which may be positive, negative or zero.

NW Holdings had no letters of credit issued and outstanding at September 30, 2022 and 2021.

NW Natural
At September 30, 2022, NW Natural had a sustainability-linked multi-year credit agreement for unsecured revolving loans totaling $400 million, with a feature that allows NW Natural to request increases in the total commitment amount, up to a maximum of $600 million. The maturity date of the agreement is November 3, 2026 with an available extension of commitments for two additional one-year periods, subject to lender approval.

All lenders under the NW Natural credit agreement are major financial institutions with committed balances and investment grade credit ratings as of September 30, 2022 as follows:

In millions

Lender rating, by category		Loan Commitment
AA/Aa	$	400
Total	$	400

Based on credit market conditions, it is possible one or more lending commitments could be unavailable to NW Natural if the lender defaulted due to lack of funds or insolvency; however, NW Natural does not believe this risk to be imminent due to the lenders' strong investment-grade credit ratings. NW Natural did not have any outstanding balances drawn under this credit facility at September 30, 2022, September 30, 2021 and December 31, 2021.

The NW Natural credit agreement permits the issuance of letters of credit in an aggregate amount of up to $60 million. The principal amount of borrowings under the credit agreement is due and payable on the maturity date. There were no outstanding balances under this credit agreement at September 30, 2022 or 2021. The credit agreement requires NW Natural to maintain a consolidated indebtedness to total capitalization ratio of 70% or less. Failure to comply with this covenant would entitle the lenders to terminate their lending commitments and accelerate the maturity of all amounts outstanding. NW Natural was in compliance with this covenant at September 30, 2022 and 2021, with consolidated indebtedness to total capitalization ratios of 50.6% and 59.5%, respectively.

The NW Natural credit agreement also requires NW Natural to maintain credit ratings with S&P and Moody's and notify the lenders of any change in NW Natural's senior unsecured debt ratings or senior secured debt ratings, as applicable, by such rating agencies. A change in NW Natural's debt ratings by S&P or Moody's is not an event of default, nor is the maintenance of a specific minimum level of debt rating a condition of drawing upon the credit agreement. Rather, interest rates on any loans outstanding under the credit agreement are tied to debt ratings and therefore, a change in the debt rating would increase or decrease the cost of any loans under the credit agreement when ratings are changed. See "*Credit Ratings"* below.

The NW Natural credit agreement also includes a mechanism that can increase or decrease the undrawn interest rate by up to 1 basis point and undrawn interest rate by up to 5 basis points in accordance with NW Natural's independently verified achievement of quantifiable metrics related to two goals—one related to carbon savings and one related to in-line inspections of NW Natural's transmission pipeline. Performance against these metrics is designed to be assessed annually with pricing adjustments, if any, resetting off of primary pricing annually and not cumulatively.

Interest charges on the NW Natural credit agreement are indexed to LIBOR. The agreement contains provisions addressing the end of the use of LIBOR as a benchmark rate of interest and a mechanism for determining an alternative benchmark rate of interest without an amendment to the credit agreement. If the provisions are triggered, LIBOR would be replaced by a secured overnight financing rate (SOFR)-based rate, if one can be determined, or, if not, LIBOR may be replaced by a rate selected by NW Natural and the administrative agent under the agreement. The replacement rate is also subject to a spread adjustment which may be positive, negative or zero.

Credit Ratings

NW Holdings does not currently maintain ratings with S&P or Moody's. NW Natural's credit ratings are a factor of liquidity, potentially affecting access to the capital markets including the commercial paper market. NW Natural's credit ratings also have an impact on the cost of funds and the need to post collateral under derivative contracts. The following table summarizes NW Natural's current credit ratings:

	S&P	Moody's
Commercial paper (short-term debt)	A-1	P-2
Senior secured (long-term debt)	AA-	A2
Senior unsecured (long-term debt)	n/a	Baa1
Corporate credit rating	A+	n/a
Ratings outlook	Stable	Stable

The above credit ratings and ratings outlook are dependent upon a number of factors, both qualitative and quantitative, and are subject to change at any time. The disclosure of or reference to these credit ratings is not a recommendation to buy, sell or hold NW Holdings or NW Natural securities. Each rating should be evaluated independently of any other rating.
As part of the ring-fencing conditions agreed upon with the OPUC and WUTC in connection with the holding company reorganization, NW Holdings and NW Natural are required to maintain separate credit ratings, long-term debt ratings, and preferred stock ratings, if any.

Long-Term Debt

In September 2022, NW Holdings entered into an 18-month credit agreement for $100.0 million and borrowed the full amount. The loan carried an interest rate of 4.1% at September 30, 2022, which is based on the SOFR. The loan is due and payable on March 15, 2024. The credit agreement prohibits NW Holdings from permitting consolidated indebtedness to be greater than 70% of total capitalization, each as defined therein and calculated as of the end of each fiscal quarter. Failure to comply with this financial covenant would entitle the lenders to accelerate the maturity of the amounts outstanding under the credit agreement. NW Holdings was in compliance with this financial covenant as of September 30, 2022.

In September 2022, NWN Water entered into an 18-month credit agreement for $50.0 million and borrowed the full amount. The loan carried an interest rate of 4.1% at September 30, 2022, which is based on the SOFR. The loan is due and payable on March 15, 2024. The credit agreement prohibits NWN Water and NW Holdings from permitting consolidated indebtedness to be greater than 70% of total capitalization, each as defined therein and calculated as of the end of each fiscal quarter. Failure to comply with this financial covenant would entitle the lenders to accelerate the maturity of the amounts outstanding under the credit agreement. NWN Water and NW Holdings were in compliance with this financial covenant as of September 30, 2022.

In July 2022, NW Natural entered into a Bond Purchase Agreement between NW Natural and the institutional investors named as purchasers therein (the Bond Purchase Agreement). The Bond Purchase Agreement provides for the issuance of $140.0 million aggregate principal amount of NW Natural's First Mortgage Bonds due in 2052 (the Bonds). The Bonds were issued on September 30, 2022. The Bonds bear interest at the rate of 4.8% per annum, payable semi-annually on March 30 and September 30 of each year, commencing March 30, 2023, and will mature on September 30, 2052. The Bonds are subject to redemption prior to maturity at the option of NW Natural, in whole or in part, (i) at any time prior to March 30, 2052, at a redemption price equal to 100% of the principal amount thereof plus a “make-whole” premium and accrued and unpaid interest thereon to the date of redemption, and (ii) at any time on and after March 30, 2052, at 100% of the principal amount thereof plus accrued and unpaid interest thereon to the date of redemption.

In November 2021, NW Natural issued $130.0 million of First Mortgage Bonds (FMBs) with an interest rate of 3.08% due in 2051. Issued as a sustainability bond, net proceeds from the sale of the FMBs were added to the general funds of NW Natural and used for general corporate purposes, while an amount equivalent to the net proceeds from the sale of the bonds was or will be allocated to finance and/or refinance, in whole or in part, investments in one or more new or existing projects of NW Natural deemed to be an eligible project in the bond offering. Projects deemed eligible for the FMB offering included expenditures related to RNG and hydrogen generation and infrastructure, programs related to energy efficiency, expenditures related to operations or service centers that have or are expected to receive LEED Gold or Platinum certification, and expenditures and program investments related to enabling opportunities for diverse business enterprises.

In June 2021, NWN Water entered into a five-year term loan agreement for $55.0 million. The loan carried an interest rate of 3.5% at September 30, 2022, which is based upon the one-month LIBOR rate. The loan is guaranteed by NW Holdings and requires NW Holdings to maintain a consolidated indebtedness to total capitalization ratio of 70% or less. Failure to comply with this covenant would entitle the lenders to terminate their lending commitments and accelerate the maturity of all amounts outstanding. NW Holdings was in compliance with this covenant at September 30, 2022, with a consolidated indebtedness to total capitalization ratio of 56.9%.

At September 30, 2022, NW Holdings and NW Natural had long-term debt outstanding of $1,337.6 million and $1,126.5 million, respectively, which included $8.3 million and $8.2 million of unamortized debt issuance costs at NW Holdings and NW Natural, respectively. NW Natural's long-term debt consists of first mortgage bonds (FMBs) with maturity dates ranging from 2023 through 2052, interest rates ranging from 2.8% to 7.9%, and a weighted average interest rate of 4.5%.

$50.0 million of long-term debt is scheduled to mature over the next twelve months as of September 30, 2022 at NW Natural. See Part II, Item 7, "Financial Condition—*Long-Term Debt*" in the 2021 Form 10-K for long-term debt maturing over the next five years.

Bankruptcy Ring-fencing Restrictions

As part of the ring-fencing conditions agreed upon with the OPUC and WUTC, NW Natural is required to have one director who is independent from NW Natural management and from NW Holdings and to issue one share of NW Natural preferred stock to an independent third party. NW Natural was in compliance with both of these ring-fencing provisions as of September 30, 2022. NW Natural may file a voluntary petition for bankruptcy only if approved unanimously by the Board of Directors of NW Natural, including the independent director, and by the holder of the preferred share.

Cash Flows

Operating Activities

Changes in operating cash flows are primarily affected by net income or loss, changes in working capital requirements, and other cash and non-cash adjustments to operating results.

	Nine Months Ended September 30,		
In thousands	2022	2021	YTD Change
NW Natural cash provided by operating activities	$ 162,593	$ 161,828	$ 765
NW Holdings cash provided by operating activities	$ 165,961	$ 181,724	$ (15,763)

NINE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Cash provided by operating activities decreased $15.8 million at NW Holdings and increased $0.8 million at NW Natural. The significant factors contributing to the decrease at NW Holdings were as follows:
- $32.0 million increase in asset optimization revenue sharing bill credits to customers;
- $23.8 million decrease in the regulatory incentive sharing mechanism related to revenues earned from Mist gas storage and asset management activities primarily related to the 2021 cold weather event; and
- $24.2 million increase in inventories due to higher gas prices; partially offset by
- $31.6 million decrease in net deferred gas costs as gas costs for the nine months ended September 30, 2021 were 27% above the PGA estimates primarily due to the 2021 cold weather event; and
- $30.9 million increase in accounts receivable and accrued unbilled revenue resulting from higher balances due to colder weather.

NW Natural did not make any cash contributions to its qualified defined benefit pension plans during the nine months ended September 30, 2022 compared to $9.6 million for the same period in 2021. NW Natural does not expect to make any plan contributions during the remainder of 2022. The amount and timing of future contributions will depend on market interest rates and investment returns on the plans' assets. For additional information, see Note 10.

The increase in cash provided by operating activities at NW Natural was primarily driven by a benefit from income and other taxes, partially offset by the decrease discussed above.

NW Holdings and NW Natural have lease and purchase commitments relating to their operating activities that are financed with cash flows from operations. For information on cash flow requirements related to leases and other purchase commitments, see Note 7 and Note 16 in the 2021 Form 10-K.

Investing Activities

	Nine Months Ended September 30,		
In thousands	2022	2021	YTD Change
NW Natural cash used in investing activities	$ (239,277)	$ (197,169)	$ (42,108)
NW Holdings cash used in investing activities	$ (257,004)	$ (203,521)	$ (53,483)

NINE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Cash used in investing activities increased $53.5 million at NW Holdings and increased $42.1 million at NW Natural. The increase in cash used in investing activities was primarily due to an increase of $39.5 million and $37.1 million in capital expenditures at NW Holdings and NW Natural, respectively.

NW Natural capital expenditures in 2022 (including cloud-based software classified as other assets) are anticipated to be in the range of $310 million to $350 million and for the five-year period from 2022 to 2026 are expected to range from $1.3 billion to $1.5 billion. NW Natural Water is expected to invest approximately $15 million in 2022 related to maintenance capital expenditures for water and wastewater utilities currently owned as of December 31, 2021, and for the five-year period from 2022 to 2026, capital expenditures are expected to be approximately $60 million to $70 million. Investments in our infrastructure during and after 2022 will depend largely on additional regulations, growth, and expansion opportunities. Required funds for the investments are expected to be internally generated or financed with long-term debt or equity, as appropriate.

Financing Activities

	Nine Months Ended September 30,		
In thousands	2022	2021	YTD Change
NW Natural cash provided by financing activities	$ 78,952	$ 37,469	$ 41,483
NW Holdings cash provided by financing activities	$ 184,193	$ 14,015	$ 170,178

NINE MONTHS ENDED SEPTEMBER 30, 2022 COMPARED TO SEPTEMBER 30, 2021. Cash provided by financing activities increased $170.2 million and $41.5 million at NW Holdings and NW Natural, respectively. The increase at NW Holdings was attributable to net proceeds from the issuance of common stock and the ATM equity program of $190.9 million, partially offset by changes in debt. The increase at NW Natural was attributable to cash contributions from NW Holdings of $179.4 million, partially offset by changes in debt.

Contingent Liabilities

Loss contingencies are recorded as liabilities when it is probable a liability has been incurred and the amount of the loss is reasonably estimable in accordance with accounting standards for contingencies. See “*Application of Critical Accounting Policies and Estimates*” in the 2021 Form 10-K. At September 30, 2022, NW Natural's total estimated liability related to environmental sites is $99.8 million. See "Results of Operations—Regulatory Matters—Rate Mechanisms—*Environmental Costs*" in the 2021 Form 10-K and Note 16.

APPLICATION OF CRITICAL ACCOUNTING POLICIES AND ESTIMATES

In preparing financial statements in accordance with U.S. GAAP, management exercises judgment to assess the potential outcomes and related accounting impacts in the selection and application of accounting principles, including making estimates and assumptions that affect reported amounts of assets, liabilities, revenues, expenses, and related disclosures in the financial statements. Management considers critical accounting policies to be those which are most important to the representation of financial condition and results of operations and which require management’s most difficult and subjective or complex judgments, including accounting estimates that could result in materially different amounts if reported under different conditions or if they used different assumptions. Our most critical estimates and judgments for both NW Holdings and NW Natural include accounting for:

•regulatory accounting;
•revenue recognition;
•derivative instruments and hedging activities;
•pensions and postretirement benefits;
•income taxes;
•environmental contingencies; and
•impairment of long-lived assets and goodwill.

There have been no material changes to the information provided in the 2021 Form 10-K with respect to the application of critical accounting policies and estimates. See Part II, Item 7, "*Application of Critical Accounting Policies and Estimates,*" in the 2021 Form 10-K.

Management has discussed its current estimates and judgments used in the application of critical accounting policies with the Audit Committees of the Boards of NW Holdings and NW Natural. Within the context of critical accounting policies and estimates, management is not aware of any reasonably likely events or circumstances that would result in materially different amounts being reported. For a description of recent accounting pronouncements that could have an impact on financial condition, results of operations or cash flows, see Note 2.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

NW Holdings and NW Natural are exposed to various forms of market risk including commodity supply risk, commodity price risk, interest rate risk, foreign currency risk, credit risk and weather risk. Management monitors and manages these financial exposures as an integral part of NW Holdings' and NW Natural's overall risk management program. No material changes have occurred related to disclosures about market risk for the nine months ended September 30, 2022. For additional information, see Part II, Item 1A, “*Risk Factors*” in this report and Part II, Item 7A, “*Quantitative and Qualitative Disclosures about Market Risk*” in the 2021 Form 10-K.

ITEM 4. CONTROLS AND PROCEDURES

(a) Evaluation of Disclosure Controls and Procedures

NW Holdings and NW Natural management, under the supervision and with the participation of the Chief Executive Officer and Chief Financial Officer, completed an evaluation of the effectiveness of the design and operation of disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the Exchange Act)). Based upon this evaluation, the Chief Executive Officer and Chief Financial Officer of each registrant have concluded that, as of the end of the period covered by this report, disclosure controls and procedures were effective to ensure that information required to be disclosed by each such registrant and included in reports filed or submitted under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC rules and forms and that such information is accumulated and communicated to management of each registrant, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

(b) Changes in Internal Control Over Financial Reporting

NW Holdings and NW Natural management are responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f).

In September 2022, we implemented a new enterprise resource planning system to replace our legacy system. The implementation was designed to increase the automation of internal controls in areas of purchasing and payables, asset management, financial reporting and consolidation and to improve access security. In connection with this implementation, we performed pre-implementation planning, design and testing of internal controls that became effective in the third quarter of 2022. Management has and will continue to evaluate and monitor NW Holdings’ and NW Natural’s internal controls over financial reporting to verify such controls remain effective as processes and procedures in each of the affected areas continue to evolve.

There were no other changes in NW Holdings' or NW Natural's internal control over financial reporting during the quarter ended September 30, 2022, that have materially affected, or are reasonably likely to materially affect, internal control over financial reporting for NW Holdings and NW Natural. The statements contained in Exhibit 31.1, Exhibit 31.2, Exhibit 31.3, and Exhibit 31.4 should be considered in light of, and read together with, the information set forth in this Item 4(b).

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

Other than the proceedings disclosed in Note 16 and those proceedings disclosed and incorporated by reference in Part I, Item 3, “*Legal Proceedings*” in the 2021 Form 10-K, we have only nonmaterial litigation, or litigation that occurs in the ordinary course of our business.

ITEM 1A. RISK FACTORS

There were no material changes from the risk factors discussed in Part I, Item 1A, "Risk Factors” in the 2021 Form 10-K. In addition to the other information set forth in this report, you should carefully consider those risk factors, which could materially affect our business, financial condition, or results of operations.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

The following table provides information about purchases of NW Holdings' equity securities that are registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended, during the quarter ended September 30, 2022:

Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased(1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs(2)	Maximum Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs(2)
Balance forward			2,124,528	$ 16,732,648
07/01/22-07/31/22	—	—	—	—
08/01/22-08/31/22	4,277	52.19	—	—
09/01/22-09/30/22	—	$ —	—	—
Total	4,277	$ 52.19	2,124,528	$ 16,732,648

(1)During the quarter ended September 30, 2022, no shares of common stock were purchased on the open market to meet the requirements of NW Holdings' Dividend Reinvestment and Direct Stock Purchase Plan. However, 4,277 shares of NW Holdings common stock were purchased on the open market to meet the requirements of share-based compensation programs. During the quarter ended September 30, 2022, no shares of NW Holdings common stock were accepted as payment for stock option exercises pursuant to the NW Natural Restated Stock Option Plan.

(2)During the quarter ended September 30, 2022, no shares of NW Holdings common stock were repurchased pursuant to the Board-approved share repurchase program. In May 2019, we received NW Holdings Board approval to extend the repurchase program through May 2022. Effective August 3, 2022, we received NW Holdings Board approval to extend the repurchase program. Such authorization will continue until the program is used, terminated or replaced. For more information on this program, refer to Note 5 in the 2021 Form 10-K.

ITEM 6. EXHIBITS

See the Exhibit Index below, which is incorporated by reference herein.

NORTHWEST NATURAL GAS COMPANY
NORTHWEST NATURAL HOLDING COMPANY

Exhibit Index to Quarterly Report on Form 10-Q
For the Quarter Ended September 30, 2022

Exhibit Index

Exhibit Number	Document
*4.1	Credit Agreement, dated as of September 15, 2022, among Northwest Natural Holding Company and the lenders party thereto, with U.S. Bank National Association as administrative agent (incorporated by reference to Exhibit 4.1 to the Form 8-K filed September 21, 2022, file No. 1-38681).
*4.2	Credit Agreement, dated as of September 15, 2022, among NW Natural Water Company, LLC, Northwest Natural Holding Company and the lenders party thereto, with U.S. Bank National Association as administrative agent (incorporated by reference to Exhibit 4.2 to the Form 8-K filed September 21, 2022, file No. 1-38681).
*4.3	Twenty-fourth Supplemental Indenture, providing for, among other things, First Mortgage Bonds, 4.78% Series due 2052, dated as of September 1, 2022, by and between Northwest Natural Gas Company and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to the Form 8-K filed September 30, 2022, file No. 1-15973).
31.1	Certification of Principal Executive Officer of Northwest Natural Gas Company Pursuant to Rule 13a-14(a)/15-d-14(a), Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Principal Financial Officer of Northwest Natural Gas Company Pursuant to Rule 13a-14(a)/15-d-14(a), Section 302 of the Sarbanes-Oxley Act of 2002.
31.3	Certification of Principal Executive Officer of Northwest Natural Holding Company Pursuant to Rule 13a-14(a)/15-d-14(a), Section 302 of the Sarbanes-Oxley Act of 2002.
31.4	Certification of Principal Financial Officer of Northwest Natural Holding Company Pursuant to Rule 13a-14(a)/15-d-14(a), Section 302 of the Sarbanes-Oxley Act of 2002.
**32.1	Certification of Principal Executive Officer and Principal Financial Officer of Northwest Natural Gas Company Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
**32.2	Certification of Principal Executive Officer and Principal Financial Officer of Northwest Natural Holding Company Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	The following materials formatted in Inline Extensible Business Reporting Language (Inline XBRL): (i) Consolidated Statements of Income; (ii) Consolidated Balance Sheets; (iii) Consolidated Statements of Cash Flows; and (iv) Related notes. The instance document does not appear in the interactive data file because XBRL tags are embedded within the Inline XBRL document.
104	The cover page from the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2022, formatted in Inline XBRL.

* Incorporated by reference as indicated.

** Pursuant to Item 601(b)(32)(ii) of Regulation S-K, this certification is furnished and not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, each Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized. The signature for each undersigned company shall be deemed to relate only to matters having reference to such company and its subsidiaries.

NORTHWEST NATURAL GAS COMPANY

(Registrant)

Dated: November 8, 2022

/s/ Brody J. Wilson
Brody J. Wilson
Principal Accounting Officer
Vice President, Treasurer, Chief Accounting Officer and Controller

NORTHWEST NATURAL HOLDING COMPANY

(Registrant)

Dated: November 8, 2022

/s/ Brody J. Wilson
Brody J. Wilson
Principal Accounting Officer
Vice President, Treasurer, Chief Accounting Officer and Controller

EXHIBIT 31.1

CERTIFICATION

I, David H. Anderson, certify that:

1. I have reviewed this quarterly report on Form 10-Q for the quarterly period ended September 30, 2022 of Northwest Natural Gas Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 8, 2022

/s/ David H. Anderson
David H. Anderson
President and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION

I, Frank H. Burkhartsmeyer, certify that:

1. I have reviewed this quarterly report on Form 10-Q for the quarterly period ended September 30, 2022 of Northwest Natural Gas Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 8, 2022

/s/ Frank H. Burkhartsmeyer
Frank H. Burkhartsmeyer
Senior Vice President and Chief Financial Officer

EXHIBIT 31.3

CERTIFICATION

I, David H. Anderson, certify that:

1. I have reviewed this quarterly report on Form 10-Q for the quarterly period ended September 30, 2022 of Northwest Natural Holding Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 8, 2022

/s/ David H. Anderson
David H. Anderson
President and Chief Executive Officer

EXHIBIT 31.4

CERTIFICATION

I, Frank H. Burkhartsmeyer, certify that:

1. I have reviewed this quarterly report on Form 10-Q for the quarterly period ended September 30, 2022 of Northwest Natural Holding Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 8, 2022

/s/ Frank H. Burkhartsmeyer
Frank H. Burkhartsmeyer
Senior Vice President and Chief Financial Officer

EXHIBIT 32.1

NORTHWEST NATURAL GAS COMPANY
Certificate Pursuant to Section 906
of Sarbanes – Oxley Act of 2002

Each of the undersigned, DAVID H. ANDERSON, Chief Executive Officer, and FRANK H. BURKHARTSMEYER, the Chief Financial Officer, of NORTHWEST NATURAL GAS COMPANY (the Company), DOES HEREBY CERTIFY that:

1. The Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2022 (the Report) fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. Information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

IN WITNESS WHEREOF, each of the undersigned has caused this instrument to be executed this 8th day of November 2022.

/s/ David H. Anderson
David H. Anderson
President and Chief Executive Officer

/s/ Frank H. Burkhartsmeyer
Frank H. Burkhartsmeyer
Senior Vice President and Chief Financial Officer

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to Northwest Natural Gas Company and will be retained by Northwest Natural Gas Company and furnished to the Securities and Exchange Commission or its staff upon request.

EXHIBIT 32.2

NORTHWEST NATURAL HOLDING COMPANY

Certificate Pursuant to Section 906
of Sarbanes – Oxley Act of 2002

Each of the undersigned, DAVID H. ANDERSON, Chief Executive Officer, and FRANK H. BURKHARTSMEYER, the Chief Financial Officer, of NORTHWEST NATURAL HOLDING COMPANY (the Company), DOES HEREBY CERTIFY that:

1. The Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2022 (the Report) fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. Information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

IN WITNESS WHEREOF, each of the undersigned has caused this instrument to be executed this 8th day of November 2022.

/s/ David H. Anderson
David H. Anderson
President and Chief Executive Officer

/s/ Frank H. Burkhartsmeyer
Frank H. Burkhartsmeyer
Senior Vice President and Chief Financial Officer

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to Northwest Natural Holding Company and will be retained by Northwest Natural Holding Company and furnished to the Securities and Exchange Commission or its staff upon request.