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 March 31, 2022
OR
☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from ___________ to____________

NW Natural HOLDINGS™		NW Natural®	
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 April 27, 2022, 34,255,926 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 March 31, 2022

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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, seeks, believes, estimates, expects, will, 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;
- 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 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, economic conditions related thereto, the resumption of normal business operations, availability and acceptance of vaccinations, and potential future shutdowns;
- 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;

- disruptions caused by social unrest, including related protests or disturbances;
- 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 March 31,	
In thousands, except per share data	2022	2021
Operating revenues	$ 350,301	$ 315,946
Operating expenses:		
Cost of gas	145,588	112,210
Operations and maintenance	57,485	52,191
Environmental remediation	4,703	3,777
General taxes	12,104	11,369
Revenue taxes	13,360	12,664
Depreciation	28,429	28,097
Other operating expenses	994	932
Total operating expenses	262,663	221,240
Income from operations	87,638	94,706
Other income (expense), net	(954)	(3,542)
Interest expense, net	11,522	11,126
Income before income taxes	75,162	80,038
Income tax expense	18,923	20,521
Net income	56,239	59,517
Other comprehensive income:		
Amortization of non-qualified employee benefit plan liability, net of taxes of $71 and $80 for the three months ended March 31, 2022 and 2021, respectively	197	221
Comprehensive income	$ 56,436	$ 59,738
Average common shares outstanding:		
Basic	31,187	30,614
Diluted	31,212	30,633
Earnings per share of common stock:		
Basic	$ 1.80	$ 1.94
Diluted	1.80	1.94

See Notes to Unaudited Consolidated Financial Statements

NORTHWEST NATURAL HOLDING COMPANY

CONSOLIDATED BALANCE SHEETS (UNAUDITED)

In thousands	March 31, 2022	March 31, 2021	December 31, 2021
Assets:			
Current assets:			
Cash and cash equivalents	$ 24,325	$ 17,907	$ 18,559
Accounts receivable	103,131	105,226	101,495
Accrued unbilled revenue	41,772	41,907	82,169
Allowance for uncollectible accounts	(2,488)	(3,503)	(2,018)
Regulatory assets	64,481	47,789	72,391
Derivative instruments	84,438	19,914	48,130
Inventories	33,377	26,237	57,262
Income taxes receivable	—	6,000	—
Other current assets	42,329	41,315	59,288
Total current assets	391,365	302,792	437,276
Non-current assets:			
Property, plant, and equipment	4,041,894	3,788,283	3,997,243
Less: Accumulated depreciation	1,137,138	1,091,903	1,125,873
Total property, plant, and equipment, net	2,904,756	2,696,380	2,871,370
Regulatory assets	297,546	338,692	314,579
Derivative instruments	6,955	3,087	10,730
Other investments	96,266	79,034	89,278
Operating lease right of use asset, net	74,416	76,957	75,049
Assets under sales-type leases	137,837	142,586	138,995
Goodwill	70,570	69,330	70,570
Other non-current assets	74,923	49,767	56,757
Total non-current assets	3,663,269	3,455,833	3,627,328
Total assets	$ 4,054,634	$ 3,758,625	$ 4,064,604

See Notes to Unaudited Consolidated Financial Statements

NORTHWEST NATURAL HOLDING COMPANY
CONSOLIDATED BALANCE SHEETS (UNAUDITED)

In thousands, including share information	March 31, 2022	March 31, 2021	December 31, 2021
Liabilities and equity:			
Current liabilities:			
Short-term debt	$ 332,500	$ 236,225	$ 389,500
Current maturities of long-term debt	339	95,265	345
Accounts payable	130,557	88,591	133,486
Taxes accrued	14,258	23,550	15,520
Interest accrued	10,886	9,491	7,503
Regulatory liabilities	111,791	81,314	112,281
Derivative instruments	3,855	1,038	10,402
Operating lease liabilities	1,303	1,213	1,296
Other current liabilities	52,778	48,978	54,432
Total current liabilities	658,267	585,665	724,765
Long-term debt	1,044,667	860,654	1,044,587
Deferred credits and other non-current liabilities:			
Deferred tax liabilities	353,746	328,112	340,231
Regulatory liabilities	652,977	636,384	658,332
Pension and other postretirement benefit liabilities	164,530	210,811	166,684
Derivative instruments	592	1,272	412
Operating lease liabilities	79,162	80,414	79,468
Other non-current liabilities	112,749	118,989	114,979
Total deferred credits and other non-current liabilities	1,363,756	1,375,982	1,360,106
Commitments and contingencies (Note 16)			
Equity:			
Common stock - no par value; authorized 100,000 shares; issued and outstanding 31,380, 30,655, and 31,129 at March 31, 2022 and 2021, and December 31, 2021, respectively	602,382	568,066	590,771
Retained earnings	396,769	380,939	355,779
Accumulated other comprehensive loss	(11,207)	(12,681)	(11,404)
Total equity	987,944	936,324	935,146
Total liabilities and equity	$ 4,054,634	$ 3,758,625	$ 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 March 31,	
	2022	2021
Total shareholders' equity, beginning balances	$ 935,146	$ 888,733
Common stock:		
Beginning balances	590,771	565,112
Stock-based compensation	1,774	2,030
Shares issued pursuant to equity based plans, net of shares withheld for taxes	(76)	924
Issuance of common stock, net of issuance costs	9,913	—
Ending balances	602,382	568,066
Retained earnings:		
Beginning balances	355,779	336,523
Net income	56,239	59,517
Dividends on common stock	(15,249)	(15,101)
Ending balances	396,769	380,939
Accumulated other comprehensive income (loss):		
Beginning balances	(11,404)	(12,902)
Other comprehensive income	197	221
Ending balances	(11,207)	(12,681)
Total shareholders' equity, ending balances	$ 987,944	$ 936,324
Dividends per share of common stock	$ 0.4825	$ 0.4800

See Notes to Unaudited Consolidated Financial Statements

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

	Three Months Ended March 31,	
In thousands	2022	2021
Operating activities:		
Net income	$ 56,239	$ 59,517
Adjustments to reconcile net income to cash provided by operations:		
Depreciation	28,429	28,097
Regulatory amortization of gas reserves	1,481	3,634
Deferred income taxes	8,780	3,145
Qualified defined benefit pension plan expense	1,441	3,937
Contributions to qualified defined benefit pension plans	—	(4,540)
Deferred environmental expenditures, net	(4,345)	(4,270)
Environmental remediation expense	4,703	3,777
Asset optimization revenue sharing bill credits	(41,102)	(9,053)
Other	6,325	6,134
Changes in assets and liabilities:		
Receivables, net	38,664	1,044
Inventories	23,885	16,454
Income and other taxes	14,436	22,975
Accounts payable	(16,487)	(2,329)
Deferred gas costs	11,728	(28,912)
Asset optimization revenue sharing	(646)	34,633
Decoupling mechanism	4,434	656
Other, net	3,072	2,166
Cash provided by operating activities	141,037	137,065
Investing activities:		
Capital expenditures	(68,514)	(65,702)
Acquisitions, net of cash acquired	—	(42)
Proceeds from the sale of assets	195	1,960
Other	(1,431)	(91)
Cash used in investing activities	(69,750)	(63,875)
Financing activities:		
Proceeds from common stock issued, net	9,938	—
Repayment of commercial paper, maturities greater than three months	—	(100,000)
Changes in other short-term debt, net	(57,000)	31,700
Cash dividend payments on common stock	(14,452)	(13,858)
Other	(1,250)	(974)
Cash used in financing activities	(62,764)	(83,132)
Increase (decrease) in cash, cash equivalents and restricted cash	8,523	(9,942)
Cash, cash equivalents and restricted cash, beginning of period	27,120	35,454
Cash, cash equivalents and restricted cash, end of period	$ 35,643	$ 25,512
Supplemental disclosure of cash flow information:		
Interest paid, net of capitalization	$ 7,977	$ 8,976
Income taxes paid, net of refunds	773	800

See Notes to Unaudited Consolidated Financial Statements

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

	Three Months Ended March 31,	
In thousands	2022	2021
Operating revenues	$ 346,624	$ 312,350
Operating expenses:		
Cost of gas	145,644	112,266
Operations and maintenance	53,877	49,187
Environmental remediation	4,703	3,777
General taxes	11,989	11,259
Revenue taxes	13,324	12,655
Depreciation	27,637	27,169
Other operating expenses	899	919
Total operating expenses	258,073	217,232
Income from operations	88,551	95,118
Other income (expense), net	(981)	(3,665)
Interest expense, net	10,831	10,790
Income before income taxes	76,739	80,663
Income tax expense	19,323	20,552
Net income	57,416	60,111
Other comprehensive income:		
Amortization of non-qualified employee benefit plan liability, net of taxes of $71 and $80 for the three months ended March 31, 2022 and 2021, respectively	197	221
Comprehensive income	$ 57,613	$ 60,332

See Notes to Unaudited Consolidated Financial Statements

NORTHWEST NATURAL GAS COMPANY
CONSOLIDATED BALANCE SHEETS (UNAUDITED)

In thousands	March 31, 2022	March 31, 2021	December 31, 2021
Assets:			
Current assets:			
Cash and cash equivalents	$ 10,165	$ 10,418	$ 12,271
Accounts receivable	101,551	96,878	99,780
Accrued unbilled revenue	41,651	41,817	82,028
Receivables from affiliates	1,850	1,669	261
Allowance for uncollectible accounts	(2,432)	(3,460)	(1,962)
Regulatory assets	64,481	47,789	72,391
Derivative instruments	84,438	19,914	48,130
Inventories	32,757	25,737	56,752
Other current assets	39,507	40,745	47,378
Total current assets	373,968	281,507	417,029
Non-current assets:			
Property, plant, and equipment	3,971,050	3,736,431	3,931,640
Less: Accumulated depreciation	1,129,837	1,087,391	1,119,361
Total property, plant, and equipment, net	2,841,213	2,649,040	2,812,279
Regulatory assets	297,482	338,652	314,539
Derivative instruments	6,955	3,087	10,730
Other investments	81,797	79,011	74,786
Operating lease right of use asset, net	74,361	76,857	74,987
Assets under sales-type leases	137,837	142,586	138,995
Other non-current assets	73,207	48,828	55,027
Total non-current assets	3,512,852	3,338,061	3,481,343
Total assets	$ 3,886,820	$ 3,619,568	$ 3,898,372

See Notes to Unaudited Consolidated Financial Statements

NORTHWEST NATURAL GAS COMPANY
CONSOLIDATED BALANCE SHEETS (UNAUDITED)

In thousands	March 31, 2022	March 31, 2021	December 31, 2021
Liabilities and equity:			
Current liabilities:			
Short-term debt	$ 188,500	$ 175,225	$ 245,500
Current maturities of long-term debt	—	59,971	—
Accounts payable	127,569	87,823	131,475
Payables to affiliates	9,619	29,744	1,248
Taxes accrued	14,224	13,865	15,476
Interest accrued	10,708	9,460	7,296
Regulatory liabilities	111,791	81,314	112,281
Derivative instruments	3,855	1,038	10,402
Operating lease liabilities	1,286	1,167	1,273
Other current liabilities	52,053	48,488	53,591
Total current liabilities	519,605	508,095	578,542
Long-term debt	986,627	857,365	986,495
Deferred credits and other non-current liabilities:			
Deferred tax liabilities	351,191	326,301	337,717
Regulatory liabilities	651,995	635,515	657,350
Pension and other postretirement benefit liabilities	164,530	210,811	166,684
Derivative instruments	592	1,272	412
Operating lease liabilities	79,125	80,358	79,431
Other non-current liabilities	111,546	118,286	113,934
Total deferred credits and other non-current liabilities	1,358,979	1,372,543	1,355,528
Commitments and contingencies (Note 16)			
Equity:			
Common stock	436,042	319,506	435,515
Retained earnings	596,774	574,740	553,696
Accumulated other comprehensive loss	(11,207)	(12,681)	(11,404)
Total equity	1,021,609	881,565	977,807
Total liabilities and equity	$ 3,886,820	$ 3,619,568	$ 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 March 31,	
	2022	2021
Total shareholder's equity, beginning balances	$ 977,807	$ 835,184
Common stock:		
Beginning balances	435,515	319,506
Capital contributions from parent	527	—
Ending balances	436,042	319,506
Retained earnings:		
Beginning balances	553,696	528,580
Net income	57,416	60,111
Dividends on common stock	(14,338)	(13,951)
Ending balances	596,774	574,740
Accumulated other comprehensive income (loss):		
Beginning balances	(11,404)	(12,902)
Other comprehensive income	197	221
Ending balances	(11,207)	(12,681)
Total shareholder's equity, ending balances	$ 1,021,609	$ 881,565

See Notes to Unaudited Consolidated Financial Statements

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

In thousands	Three Months Ended March 31, 2022	2021
Operating activities:		
Net income	$ 57,416	$ 60,111
Adjustments to reconcile net income to cash provided by operations:		
Depreciation	27,637	27,169
Regulatory amortization of gas reserves	1,481	3,634
Deferred income taxes	8,744	2,592
Qualified defined benefit pension plan expense	1,441	3,937
Contributions to qualified defined benefit pension plans	—	(4,540)
Deferred environmental expenditures, net	(4,345)	(4,270)
Environmental remediation expense	4,703	3,777
Asset optimization revenue sharing bill credits	(41,102)	(9,053)
Other	5,786	5,454
Changes in assets and liabilities:		
Receivables, net	36,920	421
Inventories	23,995	16,588
Income and other taxes	12,383	21,488
Accounts payable	(15,525)	(711)
Deferred gas costs	11,728	(28,912)
Asset optimization revenue sharing	(646)	34,633
Decoupling mechanism	4,434	656
Other, net	3,180	3,299
Cash provided by operating activities	138,230	136,273
Investing activities:		
Capital expenditures	(64,317)	(64,098)
Proceeds from the sale of assets	195	1,960
Other	(1,431)	(91)
Cash used in investing activities	(65,553)	(62,229)
Financing activities:		
Cash contributions received from parent	527	—
Repayment of commercial paper, maturities greater than three months	—	(100,000)
Changes in other short-term debt, net	(57,000)	43,700
Cash dividend payments on common stock	(14,338)	(13,951)
Other	(1,215)	(1,509)
Cash used in financing activities	(72,026)	(71,760)
Increase in cash, cash equivalents and restricted cash	651	2,284
Cash, cash equivalents and restricted cash, beginning of period	20,832	15,739
Cash, cash equivalents and restricted cash, end of period	$ 21,483	$ 18,023
Supplemental disclosure of cash flow information:		
Interest paid, net of capitalization	$ 7,288	$ 8,585
Income taxes paid, net of refunds	3,300	2,880

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 three months ended March 31, 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		
	March 31,		December 31,
In thousands	2022	2021	2021
NW Natural:			
Current:			
Unrealized loss on derivatives[1]	$ 3,855	$ 1,038	$ 10,402
Gas costs	33,215	21,851	35,641
Environmental costs[2]	7,082	5,396	6,694
Decoupling[3]	469	4	969
Pension balancing[4]	7,131	7,131	7,131
Income taxes	2,299	2,273	2,568
Other[5]	10,430	10,096	8,986
Total current	$ 64,481	$ 47,789	$ 72,391
Non-current:			
Unrealized loss on derivatives[1]	$ 592	$ 1,272	$ 412
Pension balancing[4]	35,974	41,111	38,302
Income taxes	11,129	13,895	12,609
Pension and other postretirement benefit liabilities	113,494	165,598	116,440
Environmental costs[2]	87,566	84,977	94,636
Gas costs	10,054	11,242	15,477
Decoupling[3]	—	2	—
Other[5]	38,673	20,555	36,663
Total non-current	$ 297,482	$ 338,652	$ 314,539
Other (NW Holdings)	64	40	40
Total non-current - NW Holdings	$ 297,546	$ 338,692	$ 314,579

	Regulatory Liabilities		
	March 31,		December 31,
In thousands	2022	2021	2021
NW Natural:			
Current:			
Gas costs	$ 1,922	$ 2,575	$ 70
Unrealized gain on derivatives[1]	84,438	19,914	48,130
Decoupling[3]	8,236	10,134	4,475
Income taxes	7,318	8,217	8,192
Asset optimization revenue sharing	5,186	35,878	45,124
Other[5]	4,691	4,596	6,290
Total current	$ 111,791	$ 81,314	$ 112,281
Non-current:			
Gas costs	$ 532	$ 634	$ 250
Unrealized gain on derivatives[1]	6,955	3,087	10,730
Decoupling[3]	3,585	2,652	3,412
Income taxes[6]	176,138	182,511	181,404
Accrued asset removal costs[7]	450,973	434,489	445,952
Asset optimization revenue sharing	—	—	1,810
Other[5]	13,812	12,142	13,792
Total non-current - NW Natural	$ 651,995	$ 635,515	$ 657,350
Other (NW Holdings)	982	869	982
Total non-current - NW Holdings	$ 652,977	$ 636,384	$ 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 March 31, 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 March 31, 2022 and 2021 and December 31, 2021:

	March 31,		December 31,
In thousands	2022	2021	2021
Cash and cash equivalents	$ 24,325	$ 17,907	$ 18,559
Restricted cash included in other current assets	11,318	7,605	8,561
Cash, cash equivalents and restricted cash	$ 35,643	$ 25,512	$ 27,120

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

	March 31,		December 31,
In thousands	2022	2021	2021
Cash and cash equivalents	$ 10,165	$ 10,418	$ 12,271
Restricted cash included in other current assets	11,318	7,605	8,561
Cash, cash equivalents and restricted cash	$ 21,483	$ 18,023	$ 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
Accounts receivable consist primarily of amounts due for natural gas sales and transportation services to NGD customers and amounts due for gas storage services. The payment term of these 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 enhance our review and analysis.

During 2020 and 2021, we considered the significant exposure to COVID-19 related job losses in Oregon and Washington state, and expanded our standard review procedures for our allowance for uncollectible accounts at NW Holdings and NW Natural, including analyzing the unemployment rate and comparing it to historic economic data during the 2007-2009 time period when the country experienced an economic recession. We also considered other qualitative information including recent customer interactions related to payment plans and credit issues, statistics from our website related to credit inquiries, and bill assistance programs including the arrearage management program. For the residential allowance calculation, we continue to consider the funds applied or granted to customers through a variety of assistance programs including the COVID-19 arrearage management programs in Oregon and Washington. During the third quarter of 2021, the normal collection process for residential accounts resumed. For residential and commercial accounts, we have resumed normal collection processes and our provision is based on historical write-off trends and current information on delinquent accounts. For industrial accounts, we continue to analyze those accounts on an account-by-account basis with specific reserves taken as necessary. We'll continue to closely monitor and evaluate our accounts receivable and 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	Three Months Ended March 31, 2022		As of March 31, 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	$ 479	$ (22)	$ 1,917
Commercial	178	137	(11)	304
Industrial	67	9	(26)	50
Accrued unbilled and other	313	(9)	(87)	217
Total	$ 2,018	$ 616	$ (146)	$ 2,488

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 March 31, 2022 and 2021, we had a regulatory asset of approximately $11.2 million and $5.0 million, respectively, for incurred costs associated with COVID-19 that we believe are recoverable.

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 per share are computed using NW Holdings' net income 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 per common share.

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

	Three Months Ended March 31,	
In thousands, except per share data	2022	2021
Net income	56,239	59,517
Average common shares outstanding - basic	31,187	30,614
Additional shares for stock-based compensation plans (See Note 8)	25	19
Average common shares outstanding - diluted	31,212	30,633
Earnings per share of common stock:		
Basic	$ 1.80	$ 1.94
Diluted	$ 1.80	$ 1.94
Additional information:		
Anti-dilutive shares	5	12

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, 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, 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 renewable natural gas.

NW Natural
NW Natural's activities in Other include Interstate Storage Services and third-party asset management service for NW Natural’s contracted interstate pipeline and storage capacity, appliance retail center operations, and corporate operating and non-operating revenues and expenses that cannot be allocated to NGD operations.

Earnings from third party asset management include earnings from the management of upstream interstate pipeline and storage 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 in a deferred regulatory account for prospective NGD customer billing credits.

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 March 31,				
In thousands	NGD	Other (NW Natural)	NW Natural	Other (NW Holdings)	NW Holdings
2022					
Operating revenues	$ 341,398	$ 5,226	$ 346,624	$ 3,677	$ 350,301
Depreciation	27,373	264	27,637	792	28,429
Income (loss) from operations	85,663	2,888	88,551	(913)	87,638
Net income (loss)	55,390	2,026	57,416	(1,177)	56,239
Capital expenditures	64,280	37	64,317	4,197	68,514
Total assets at March 31, 2022	3,835,222	51,598	3,886,820	167,814	4,054,634
2021					
Operating revenues	$ 301,338	$ 11,012	$ 312,350	$ 3,596	$ 315,946
Depreciation	26,913	256	27,169	928	28,097
Income (loss) from operations	86,487	8,631	95,118	(412)	94,706
Net income (loss)	53,925	6,186	60,111	(594)	59,517
Capital expenditures	63,992	106	64,098	1,604	65,702
Total assets at March 31, 2021	3,570,153	49,415	3,619,568	139,057	3,758,625
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 the environmental recovery mechanism in Oregon as well as adjustments for the 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 March 31,	
In thousands	2022	2021
NGD margin calculation:		
NGD distribution revenues	$ 336,487	$ 296,553
Other regulated services	4,911	4,785
Total NGD operating revenues	341,398	301,338
Less: NGD cost of gas	145,644	112,266
Environmental remediation	4,698	3,777
Revenue taxes	13,324	12,655
NGD margin	$ 177,732	$ 172,640

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 quarter ended March 31, 2022, NW Holdings issued and sold 195,901 shares of common stock pursuant to the ATM equity program resulting in cash proceeds of $10.1 million, net of fees and commissions paid to agents of $0.3 million. As of March 31, 2022, NW Holdings had issued and sold 571,621 shares of common stock pursuant to the ATM equity program resulting in cash proceeds of $27.6 million, net of fees and commissions paid to agents of $0.7 million. The ATM equity program was initiated to raise funds for general corporate purposes, including for NW Holdings' subsidiaries, that are reflected as equity transfers on occurrence. Contributions received by NW Natural may also be used, in part, to repay short-term indebtedness.

6. REVENUE

The following tables present disaggregated revenue:

	Three Months Ended March 31,				
In thousands	NGD	Other (NW Natural)	NW Natural	Other (NW Holdings)	NW Holdings
2022					
Natural gas sales	$ 337,296	$ —	$ 337,296	$ —	$ 337,296
Gas storage revenue, net	—	2,757	2,757	—	2,757
Asset management revenue, net	—	752	752	—	752
Appliance retail center revenue	—	1,717	1,717	—	1,717
Other revenue	630	—	630	3,677	4,307
Revenue from contracts with customers	337,926	5,226	343,152	3,677	346,829
Alternative revenue	(827)	—	(827)	—	(827)
Leasing revenue	4,299	—	4,299	—	4,299
Total operating revenues	$ 341,398	$ 5,226	$ 346,624	$ 3,677	$ 350,301
2021					
Natural gas sales	$ 296,083	$ —	$ 296,083	$ —	$ 296,083
Gas storage revenue, net	—	2,495	2,495	—	2,495
Asset management revenue, net	—	6,928	6,928	—	6,928
Appliance retail center revenue	—	1,589	1,589	—	1,589
Other revenue	415	—	415	3,596	4,011
Revenue from contracts with customers	296,498	11,012	307,510	3,596	311,106
Alternative revenue	453	—	453	—	453
Leasing revenue	4,387	—	4,387	—	4,387
Total operating revenues	$ 301,338	$ 11,012	$ 312,350	$ 3,596	$ 315,946

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 March 31, 2022, unrecognized revenue for the fixed component of the transaction price related to gas storage and asset management revenue was approximately $93.5 million. Of this amount, approximately $14.9 million will be recognized during the remainder of 2022, $18.1 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 state we operate. Customer accounts are to be paid in full each month, 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 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 March 31,	
In thousands	2022	2021
Lease revenue		
Operating leases	$ 18	$ 18
Sales-type leases	4,281	4,369
Total lease revenue	$ 4,299	$ 4,387

Additionally, lease revenue of $0.1 million was recognized for the three months ended March 31, 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-cancellable leases at March 31, 2022 are as follows:

In thousands	Operating	Sales-Type	Total
NW Natural:			
Remainder of 2022	$ 433	$ 12,728	$ 13,161
2023	74	16,557	16,631
2024	74	15,867	15,941
2025	66	15,306	15,372
2026	36	14,901	14,937
Thereafter	22	236,820	236,842
Total minimum lease payments	$ 705	$ 312,179	$ 312,884
Less: imputed interest		174,122	
Total leases receivable		$ 138,057	
Other (NW Holdings):			
Remainder of 2022	$ 38	$ —	$ 38
2023	51	—	51
2024	52	—	52
2025	53	—	53
2026	56	—	56
Thereafter	914	—	914
Total minimum lease payments	$ 1,164	$ —	$ 1,164

NW Holdings:			
Remainder of 2022	$ 471	$ 12,728	$ 13,199
2023	125	16,557	16,682
2024	126	15,867	15,993
2025	119	15,306	15,425
2026	92	14,901	14,993
Thereafter	936	236,820	237,756
Total minimum lease payments	$ 1,869	$ 312,179	$ 314,048
Less: imputed interest		174,122	
Total leases receivable		$ 138,057	

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 $4.8 million, $4.4 million and $4.7 million at March 31, 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 corporate operations center. Our leases have remaining lease terms of three 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 March 31,	
In thousands	2022	2021
NW Natural:		
Operating lease expense	$ 1,727	$ 1,678
Short-term lease expense	$ 163	$ 220
Other (NW Holdings):		
Operating lease expense	$ 7	$ 18
NW Holdings:		
Operating lease expense	$ 1,734	$ 1,696
Short-term lease expense	$ 163	$ 220

Supplemental balance sheet information related to operating leases as of March 31, 2022 is as follows:

In thousands	March 31,		December 31,
	2022	2021	2021
NW Natural:			
Operating lease right of use asset	$ 74,361	$ 76,857	$ 74,987
Operating lease liabilities - current liabilities	$ 1,286	$ 1,167	$ 1,273
Operating lease liabilities - non-current liabilities	79,125	80,358	79,431
Total operating lease liabilities	$ 80,411	$ 81,525	$ 80,704
Other (NW Holdings):			
Operating lease right of use asset	$ 55	$ 100	$ 62

Operating lease liabilities - current liabilities	$ 17	$ 46	$ 23
Operating lease liabilities - non-current liabilities	37	56	37
Total operating lease liabilities	$ 54	$ 102	$ 60
NW Holdings:			
Operating lease right of use asset	$ 74,416	$ 76,957	$ 75,049
Operating lease liabilities - current liabilities	$ 1,303	$ 1,213	$ 1,296
Operating lease liabilities - non-current liabilities	79,162	80,414	79,468
Total operating lease liabilities	$ 80,465	$ 81,627	$ 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	March 31,		December 31,
	2022	2021	2021
Weighted-average remaining lease term (years)	18.0	18.9	18.2
Weighted-average discount rate	7.2 %	7.2 %	7.2 %

Headquarters and Operations Center Lease

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 $6.0 million, $4.6 million and $5.7 million as of March 31, 2022 and 2021 and December 31, 2021, respectively.

Maturities of operating lease liabilities at March 31, 2022 were as follows:

In thousands	NW Natural	Other (NW Holdings)	NW Holdings
Remainder of 2022	$ 5,235	$ 18	$ 5,253
2023	7,013	6	7,019
2024	7,150	6	7,156
2025	7,185	6	7,191
2026	7,353	6	7,359
Thereafter	116,432	17	116,449
Total lease payments	150,368	59	150,427
Less: imputed interest	69,957	5	69,962
Total lease obligations	80,411	54	80,465
Less: current obligations	1,286	17	1,303
Long-term lease obligations	$ 79,125	$ 37	$ 79,162

As of March 31, 2022, finance lease liabilities with maturities of less than one year were $0.3 million at NW Natural.

Supplemental cash flow information related to leases was as follows:

	Three Months Ended March 31,	
In thousands	2022	2021
NW Natural:		
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash flows from operating leases	$ 1,733	$ 1,669
Finance cash flows from finance leases	$ 75	$ 544
Right of use assets obtained in exchange for lease obligations		
Operating leases	$ 14	$ 154
Finance leases	$ 100	$ 74

Other (NW Holdings):				
Cash paid for amounts included in the measurement of lease liabilities				
Operating cash flows from operating leases	$	6	$	16
NW Holdings:				
Cash paid for amounts included in the measurement of lease liabilities				
Operating cash flows from operating leases	$	1,739	$	1,685
Finance cash flows from finance leases	$	75	$	544
Right of use assets obtained in exchange for lease obligations				
Operating leases	$	14	$	154
Finance leases	$	100	$	74

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 $2.2 million, $1.9 million and $2.1 million at March 31, 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 and 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 three months ended March 31, 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 March 31, 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 56,335 and 56,885 shares in the first quarters of 2023 and 2024, respectively.

As of March 31, 2022, there was $0.3 million of unrecognized compensation cost associated with the 2020 LTIP grants, which is expected to be recognized through 2022.

Restricted Stock Units
During the three months ended March 31, 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 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 common stock on the grant date. As of March 31, 2022, there was $4.6 million of unrecognized compensation cost from grants of RSUs, which is expected to be recognized by NW Natural and other subsidiaries over a period extending through 2026.

9. DEBT

Short-Term Debt

At March 31, 2022, NW Holdings and NW Natural had short-term debt outstanding of $332.5 million and $188.5 million, respectively. NW Holdings' short-term debt consisted of $144.0 million in revolving credit agreement loans at NW Holdings and $188.5 million of commercial paper outstanding at NW Natural. The weighted average interest rate on the revolving credit agreement at March 31, 2022 was 1.5% at NW Holdings. The weighted average interest rate of commercial paper at March 31, 2022 was 0.8% at NW Natural. At March 31, 2022, NW Natural's commercial paper had a maximum remaining maturity of 39 days and an average remaining maturity of 17 days.

In June 2021, NW Natural entered into a $100.0 million 364-Day Term Loan Credit Agreement (Term Loan) and borrowed the full amount. All principal and interest under the Term Loan was repaid in December 2021.

Long-Term Debt

At March 31, 2022, NW Holdings and NW Natural had long-term debt outstanding of $1,045.0 million and $986.6 million, respectively, which included $8.2 million and $8.1 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 2051, interest rates ranging from 2.8% to 7.9%, and a weighted average interest rate of 4.4%.

No long-term debt is scheduled to mature over the next twelve months following March 31, 2022 at NW Natural.

In June 2019, NW Natural Water, a wholly-owned subsidiary of NW Holdings, entered into a two-year term loan agreement for $35.0 million. The loan was repaid in June 2021 upon its maturity date.

In June 2021, NW Natural 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 1.2% at March 31, 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 March 31, 2022, with a consolidated indebtedness to total capitalization ratio of 58.2%.

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:

	March 31,		December 31,
In thousands	2022	2021	2021
NW Natural:			
Gross long-term debt	$ 994,700	$ 924,700	$ 994,700
Unamortized debt issuance costs	(8,073)	(7,364)	(8,205)
Carrying amount	$ 986,627	$ 917,336	$ 986,495
Estimated fair value[1]	$ 997,196	$ 1,014,527	$ 1,110,741
NW Holdings:			
Gross long-term debt	$ 1,053,177	$ 963,283	$ 1,053,241
Unamortized debt issuance costs	(8,171)	(7,364)	(8,309)
Carrying amount	$ 1,045,006	$ 955,919	$ 1,044,932
Estimated fair value[1]	$ 1,059,629	$ 1,053,036	$ 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 for the pension and other postretirement benefit plans:

	Three Months Ended March 31,			
	Pension Benefits		Other Postretirement Benefits	
In thousands	2022	2021	2022	2021
Service cost	$ 1,530	$ 1,714	$ 47	$ 55
Interest cost	3,659	3,343	180	165
Expected return on plan assets	(6,427)	(6,099)	—	—
Amortization of prior service credit	—	—	(83)	(117)
Amortization of net actuarial loss	3,198	5,501	99	131
Net periodic benefit cost	1,960	4,459	243	234
Amount allocated to construction	(664)	(726)	(18)	(21)
Net periodic benefit cost charged to expense	1,296	3,733	225	213
Amortization of regulatory balancing account	2,801	2,801	—	—
Net amount charged to expense	$ 4,097	$ 6,534	$ 225	$ 213

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 March 31,	
In thousands	2022	2021
Beginning balance	$ (11,404)	$ (12,902)
Amounts reclassified from AOCL:		
Amortization of actuarial losses	268	301
Total reclassifications before tax	268	301
Tax benefit	(71)	(80)
Total reclassifications for the period	197	221
Ending balance	$ (11,207)	$ (12,681)

Employer Contributions to Company-Sponsored Defined Benefit Pension Plans
NW Natural made no cash contributions to its qualified defined benefit pension plans during the three months ended March 31, 2022 compared to $4.5 million for the same period in 2021. NW Natural does not expect to make any plan contributions during the remainder of 2022.

Defined Contribution Plan
The Retirement K Savings Plan is a qualified defined contribution plan under Internal Revenue Code Sections 401(a) and 401(k). Employer contributions totaled $2.9 million and $2.6 million for the three months ended March 31, 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 March 31,			
	NW Holdings		NW Natural	
In thousands	2022	2021	2022	2021
Income tax at statutory rate (federal)	$ 15,783	$ 16,808	$ 16,115	$ 16,939
State income tax	6,513	7,308	6,584	7,325
Increase (decrease):				
Differences required to be flowed-through by regulatory commissions	(3,173)	(3,605)	(3,173)	(3,605)
Other, net	(200)	10	(203)	(107)
Total provision for income taxes	$ 18,923	$ 20,521	$ 19,323	$ 20,552
Effective income tax rate	25.2 %	25.6 %	25.2 %	25.5 %

The NW Holdings and NW Natural effective income tax rates for the three months ended March 31, 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:

	March 31,		December 31,
In thousands	2022	2021	2021
NW Natural:			
NGD plant in service	$ 3,740,105	$ 3,594,226	$ 3,721,939
NGD work in progress	156,575	70,766	135,398
Less: Accumulated depreciation	1,108,930	1,067,502	1,098,715
NGD plant, net	2,787,750	2,597,490	2,758,622
Other plant in service	69,333	66,314	69,332
Other construction work in progress	5,037	5,125	4,971
Less: Accumulated depreciation	20,907	19,889	20,646
Other plant, net	53,463	51,550	53,657
Total property, plant, and equipment, net	$ 2,841,213	$ 2,649,040	$ 2,812,279
Other (NW Holdings):			
Other plant in service	$ 70,844	$ 51,852	$ 65,603
Less: Accumulated depreciation	7,301	4,512	6,512
Other plant, net	$ 63,543	$ 47,340	$ 59,091
NW Holdings:			
Total property, plant, and equipment, net	$ 2,904,756	$ 2,696,380	$ 2,871,370
NW Natural:			
Capital expenditures in accrued liabilities	$ 45,964	$ 20,969	$ 37,537
NW Holdings:			
Capital expenditures in accrued liabilities	$ 47,797	$ 21,118	$ 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		
	March 31,		December 31,	March 31,		December 31,
In thousands	2022	2021	2021	2022	2021	2021
Investments in life insurance policies	$ 48,486	$ 47,411	$ 48,178	$ 48,486	$ 47,411	$ 48,178
Investments in gas reserves, non-current	25,364	31,600	26,608	25,364	31,600	26,608
Investment in unconsolidated affiliates	22,416	23	14,492	7,947	—	—
Total other investments	$ 96,266	$ 79,034	$ 89,278	$ 81,797	$ 79,011	$ 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 March 31, 2022. Gas reserves are stated at cost, net of regulatory amortization, with the associated deferred tax benefits of $11.0 million $9.8 million and $6.9 million, which are recorded as liabilities in the March 31, 2022, March 31, 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 $5.2 million, $10.7 million, and $5.4 million as of March 31, 2022, March 31, 2021, and December 31, 2021, respectively. See Note 13 in the 2021 Form 10-K.

Investments in Unconsolidated Affiliates
On December 17, 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. 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 $10.4 million higher than the underlying equity in the net assets of the investee at March 31, 2022 due to equity method goodwill. Equity in earnings 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 March 31, 2022, NW Natural had an investment balance in Lexington of $7.9 million.

14. BUSINESS COMBINATIONS

2022 Business Combinations
During the three months ended March 31, 2022, there were no acquisitions qualifying as business combinations.

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 $70.6 million, $69.3 million, and $70.6 million as of March 31, 2022, March 31, 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 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:

	March 31,		December 31,
In thousands	2022	2021	2021
Natural gas (in therms):			
Financial	449,710	597,495	618,815
Physical	317,840	187,595	431,628
Foreign exchange	$ 5,216	$ 5,954	$ 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 2021-22 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.

NW Natural entered the 2021-22 gas year with its forecasted sales volumes hedged at approximately 79% in total. The total hedged for Oregon was approximately 82%, including 62% in financial hedges and 19% in physical gas supplies. The total hedged for Washington was approximately 57%, including 44% 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 March 31,			
	2022		2021	
In thousands	Natural gas commodity	Foreign exchange	Natural gas commodity	Foreign exchange
Benefit (expense) to cost of gas	$ 73,785	$ 80	$ 20,482	$ 77
Operating revenues (expense)	—	—	(27)	—
Amounts deferred to regulatory accounts on balance sheet	(73,785)	(80)	(20,459)	(77)
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 $36.0 million and $5.1 million for the three months ended March 31, 2022 and 2021, respectively, from the settlement of natural gas financial derivative contracts. 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 March 31, 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 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 $88.6 million and $21.3 million at March 31, 2022 and 2021. If netted by counterparty, NW Natural's physical and financial derivative position would result in an asset of $89.3 million and a liability of $2.4 million as of March 31, 2022, an asset of $21.2 million and a liability of $0.5 million as of March 31, 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. In certain cases, NW Natural may require guarantees or letters of credit from counterparties to meet 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 outstanding derivatives was immaterial to the fair value calculation at March 31, 2022. The net fair value was an asset of $86.9 million, $20.7 million, and $48.0 million as of March 31, 2022 and 2021, and December 31, 2021, respectively. No Level 3 inputs were used in our derivative valuations during the three months ended March 31, 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		
	March 31,		December 31,	March 31,		December 31,
In thousands	2022	2021	2021	2022	2021	2021
Portland Harbor site:						
Gasco/Siltronic Sediments	$ 6,086	$ 7,026	$ 7,582	$ 41,408	$ 42,374	$ 42,076
Other Portland Harbor	2,198	2,175	2,592	9,092	6,954	9,570
Gasco/Siltronic Upland site	13,203	13,135	15,711	35,283	39,302	36,215
Front Street site	799	1,258	1,100	868	1,132	811
Oregon Steel Mills	—	—	—	179	179	179
Total	$ 22,286	$ 23,594	$ 26,985	$ 86,830	$ 89,941	$ 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 $47.5 million to $350 million. NW Natural has recorded a liability of $47.5 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.

<u>Gasco Uplands Site</u>
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.

<u>Other Sites</u>
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 $1.7 million for munitions and 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:

	March 31,		December 31,
In thousands	2022	2021	2021
Deferred costs and interest [1]	$ 45,482	$ 46,409	$ 45,122
Accrued site liabilities [2]	109,061	113,456	115,773
Insurance proceeds and interest	(59,895)	(69,492)	(59,564)
Total regulatory asset deferral[1]	$ 94,648	$ 90,373	$ 101,331
Current regulatory assets[3]	7,082	5,396	6,694
Long-term regulatory assets[3]	87,566	84,977	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 $0.1 million at March 31, 2022, $0.1 million at March 31, 2021, and $0.1 million 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 described 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

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 settlement. NW Holdings received net offering proceeds, after deducting the underwriter's discounts and commissions and estimated expenses payable by NW Holdings, of approximately $138.6 million. The proceeds are to be 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.

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 months ended March 31, 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 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 March 31,	
	2022	2021
Earnings per share of common stock (diluted) - Total	$ 1.80	$ 1.94
Diluted EPS - NGD segment[1]	1.77	1.76
Diluted EPS - NW Holdings - other[1]	0.03	0.18

[1] Non-GAAP financial measure

EXECUTIVE SUMMARY

Current financial results and highlights include:
- Reported net income of $1.80 per share (diluted) for the first quarter of 2022, compared to net income of $1.94 per share (diluted) in the prior year;
- Added more than 10,800 meters during the past twelve months for a growth rate of 1.4% at March 31, 2022;
- Invested nearly $70 million in our utility systems in the first three months of 2022 for greater reliability and resiliency;
- Commenced operations at the first renewable natural gas (RNG) facility under the landmark Oregon legislation Senate Bill 98, which is producing RNG on behalf of our gas utility customers;
- Construction began on the first RNG facility in which our competitive renewables business is investing; and
- Continued executing our water and wastewater investment strategy, announcing acquisitions near our existing service territory in Texas.

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

	Three Months Ended March 31,				
	2022		2021		YTD
In thousands, except per share data	Amount	Per Share	Amount	Per Share	Change
Consolidated net income	$ 56,239	$ 1.80	$ 59,517	$ 1.94	$ (3,278)

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

	Three Months Ended March 31,		
	2022	2021	YTD
In thousands	Amount	Amount	Change
Consolidated net income	$ 57,416	$ 60,111	$ (2,695)
Natural gas distribution margin	$ 177,732	$ 172,640	$ 5,092

THREE MONTHS ENDED MARCH 31, 2022 COMPARED TO MARCH 31, 2021.

Consolidated net income decreased $2.7 million at NW Natural primarily due to the following factors:
- $5.9 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
- $4.7 million increase in operations and maintenance expenses due to higher contract labor, compensation costs, information technology expenses and amortization expense related to cloud computing arrangements; partially offset by
- $5.1 million increase in NGD segment margin driven by the 2021 Washington rate case, customer growth and a benefit from the gas cost incentive sharing mechanism;
- $2.7 million increase in other income (expense), net driven by lower pension non-service costs; and
- $1.2 million decrease in income tax expense primarily due to a decrease in pretax income.

Consolidated net income decreased $3.3 million at NW Holdings primarily due to the following factors:
- $2.7 million decrease in consolidated net income at NW Natural as discussed above; and
- $0.6 million decrease in other net income primarily reflecting higher business development costs at the holding company related to water and wastewater utilities.

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, 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. 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 first quarter of 2022.

DIVIDENDS

Dividend highlights include:

Per common share	Three Months Ended March 31, 2022		2021		YTD Change	
Dividends paid	$	0.4825	$	0.4800	$	0.0025

In April 2022, the Board of Directors of NW Holdings declared a quarterly dividend on NW Holdings common stock of $0.4825 per share. The dividend is payable on May 13, 2022 to shareholders of record on April 29, 2022, reflecting an annual indicated dividend rate of $1.93 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:

In thousands, except EPS data	Three Months Ended March 31, 2022		2021		YTD Change	
NGD net income	$	55,390	$	53,925	$	1,465
Diluted EPS - NGD segment	$	1.77	$	1.76	$	0.01
Gas sold and delivered (in therms)		428,386		431,120		(2,734)
NGD margin(1)	$	177,732	$	172,640	$	5,092

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

THREE MONTHS ENDED MARCH 31, 2022 COMPARED TO MARCH 31, 2021. The primary factors contributing to the $1.5 million, or $0.01 per share, increase in NGD net income were as follows:

- $5.1 million increase in NGD margin due to:
  - $1.6 million increase due to new customer rates, primarily from the 2021 Washington rate case that went into effect on November 1, 2021;
  - $2.0 million increase due to customer growth; and
  - $2.3 million increase driven by the gas cost incentive sharing mechanism as the prior year included the effect of purchasing higher priced gas for the February 2021 cold weather event.

In addition to the increase in margin, NGD net income for 2022 reflects:

- $4.7 million increase in NGD operations and maintenance expenses due to higher contract labor, compensation costs, information technology expenses and amortization expense related to cloud computing arrangements; and
- $2.5 million increase in other income (expense), net driven by lower pension non-service costs.

For the three months ended March 31, 2022, total NGD volumes sold and delivered decreased 1% over the same period in 2021 primarily due to 8% warmer than average weather in the first three months of 2022 compared to 5% 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:

	Three Months Ended March 31,		Favorable/ (Unfavorable)
In thousands, except degree day and customer data	2022	2021	YTD Change
NGD volumes (therms)			
Residential and commercial sales	293,927	297,822	(3,895)
Industrial sales and transportation	134,459	133,298	1,161
Total NGD volumes sold and delivered	428,386	431,120	(2,734)
Operating Revenues			
Residential and commercial sales	$ 314,607	$ 278,584	$ 36,023
Industrial sales and transportation	21,273	17,379	3,894
Other distribution revenues	607	590	17
Other regulated services	4,911	4,785	126
Total operating revenues	341,398	301,338	40,060
Less: Cost of gas	145,644	112,266	(33,378)
Less: Environmental remediation expense	4,698	3,777	(921)
Less: Revenue taxes	13,324	12,655	(669)
NGD margin	$ 177,732	$ 172,640	$ 5,092
Margin(1)			
Residential and commercial sales	$ 163,128	$ 160,772	$ 2,356
Industrial sales and transportation	8,926	8,754	172
Gain (loss) from gas cost incentive sharing	70	(2,263)	2,333
Other margin	698	595	103
Other regulated services	4,910	4,782	128
NGD Margin	$ 177,732	$ 172,640	$ 5,092
Degree days(2)			
Average(3)	1,326	1,326	—
Actual	1,217	1,261	(3)%
Percent warmer than average weather	(8)%	(5)%	

	As of March 31,			
	2022	2021	Change	Growth
NGD Meters - end of period:				
Residential meters	718,820	708,041	10,779	1.5%
Commercial meters	68,878	68,938	(60)	(0.1)%
Industrial meters	1,074	987	87	8.8%
Total number of meters	788,772	777,966	10,806	1.4%

(1) Amounts reported as margin for each category of meters are operating revenues, which are net of revenue taxes, less cost of gas and environmental remediation expense, 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. From November 1, 2018 through October 31, 2020, average weather was calculated over the period May 31, 1992 through May 30, 2017, as determined in NW Natural's 2018 Oregon general rate case.

Residential and Commercial Sales
Residential and commercial sales highlights include:

	Three Months Ended March 31,		
In thousands	2022	2021	YTD Change
Volumes (therms)			
Residential sales	186,329	194,491	(8,162)
Commercial sales	107,598	103,331	4,267
Total volumes	293,927	297,822	(3,895)
Operating revenues			
Residential sales	$ 217,183	$ 195,802	$ 21,381
Commercial sales	97,424	82,782	14,642
Total operating revenues	$ 314,607	$ 278,584	$ 36,023
NGD margin			
Residential NGD margin	$ 119,832	$ 117,883	$ 1,949
Commercial NGD margin	43,296	42,889	407
Total NGD margin	$ 163,128	$ 160,772	$ 2,356

THREE MONTHS ENDED MARCH 31, 2022 COMPARED TO MARCH 31, 2021. Residential and commercial margin increased $2.4 million compared to the prior period. The increase was primarily driven by new customer rates in Washington that took effect on November 1, 2021 and 1.5% growth in residential meters. Volumes decreased by 3.9 million therms due to lower usage from residential customers driven by warmer weather. The decrease was partially offset by higher usage from commercial customers as COVID-19 restrictions and closures were lifted.

Industrial Sales and Transportation
Industrial sales and transportation highlights include:

	Three Months Ended March 31,		
In thousands	2022	2021	YTD Change
Volumes (therms)			
Firm and interruptible sales	28,860	26,243	2,617
Firm and interruptible transportation	105,599	107,055	(1,456)
Total volumes - sales and transportation	134,459	133,298	1,161
NGD margin			
Firm and interruptible sales	$ 3,699	$ 3,557	$ 142
Firm and interruptible transportation	5,227	5,197	30
Total margin - sales and transportation	$ 8,926	$ 8,754	$ 172

THREE MONTHS ENDED MARCH 31, 2022 COMPARED TO MARCH 31, 2021. Industrial sales and transportation margin increased by $0.2 million compared to the prior period. Volumes increased by 1.2 million therms primarily due to higher usage from multiple customers, most notably in the high-tech and electric manufacturing industries, partially offset by lower usage from customers in the pulp and paper industries.

Cost of Gas
Cost of gas highlights include:

	Three Months Ended March 31,		
In thousands	2022	2021	YTD Change
Cost of gas	$ 145,644	$ 112,266	$ 33,378
Volumes sold (therms)[(1)]	322,787	324,065	(1,278)
Average cost of gas (cents per therm)	$ 0.45	$ 0.35	$ 0.10
Gain (loss) from gas cost incentive sharing[(2)]	$ 70	$ (2,263)	$ 2,333

(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 MARCH 31, 2022 COMPARED TO MARCH 31, 2021. Cost of gas increased $33.4 million, or 30%, primarily due to a 29% increase in average cost of gas with the majority of these higher gas costs embedded in the PGA and customer growth. Volumes sold decreased 1.3 million therms driven by 8% warmer than average weather.

Other Regulated Services Margin
Other regulated services margin highlights include:

	Three Months Ended March 31,		
In thousands	2022	2021	YTD Change
North Mist storage services	$ 4,858	$ 4,716	$ 142
Other services	52	66	(14)
Total other regulated services	$ 4,910	$ 4,782	$ 128

THREE MONTHS ENDED MARCH 31, 2022 COMPARED TO MARCH 31, 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.

Other
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); 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). 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 March 31,		
In thousands, except EPS data	2022	2021	YTD Change
NW Natural other - net income	$ 2,026	$ 6,186	$ (4,160)
Other NW Holdings activity	(1,177)	(594)	(583)
NW Holdings other - net income	$ 849	$ 5,592	$ (4,743)
Diluted EPS - NW Holdings - other	$ 0.03	$ 0.18	$ (0.15)

THREE MONTHS ENDED MARCH 31, 2022 COMPARED TO MARCH 31, 2021. Other net income decreased $4.2 million at NW Natural and $4.7 million at NW Holdings. The decrease at NW Natural was primarily due to $5.9 million of lower asset management revenue mainly related to the 2021 cold weather event, partially offset by $1.6 million lower income tax expense associated with the lower revenue that did not recur in the current year. The decrease at NW Holdings was driven by the decrease at NW Natural and higher business development costs at the holding company related to water and wastewater utilities.

Consolidated Operations
Operations and Maintenance
Operations and maintenance highlights include:

	Three Months Ended March 31,		YTD
In thousands	2022	2021	Change
NW Natural	$ 53,877	$ 49,187	$ 4,690
Other NW Holdings operations and maintenance	3,608	3,004	604
NW Holdings	$ 57,485	$ 52,191	$ 5,294

THREE MONTHS ENDED MARCH 31, 2022 COMPARED TO MARCH 31, 2021. Operations and maintenance expense increased $5.3 million at NW Holdings and $4.7 million at NW Natural. The increase at NW Natural was driven by the following:
- $2.2 million increase in contract labor for safety and reliability and contracted support for information technology and corporate projects;
- $0.9 million increase in compensation costs due to higher headcount and wage increases;
- $0.7 million increase in information technology maintenance and support; and
- $0.7 million increase in amortization expense related to cloud computing arrangements.

The $0.6 million increase in other NW Holdings operations and maintenance expense primarily reflects higher business development costs at the holding company and higher operating expenses at our water and wastewater subsidiaries.

Depreciation
Depreciation highlights include:

	Three Months Ended March 31,		YTD
In thousands	2022	2021	Change
NW Natural	$ 27,637	$ 27,169	$ 468
Other NW Holdings depreciation	792	928	(136)
NW Holdings	$ 28,429	$ 28,097	$ 332

THREE MONTHS ENDED MARCH 31, 2022 COMPARED TO MARCH 31, 2021. Depreciation expense increased $0.3 million and $0.5 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.

Other Income (Expense), Net
Other income (expense), net highlights include:

	Three Months Ended March 31,		YTD
In thousands	2022	2021	Change
NW Natural other income (expense), net	$ (981)	$ (3,665)	$ 2,684
Other NW Holdings activity	27	123	(96)
NW Holdings other income (expense), net	$ (954)	$ (3,542)	$ 2,588

THREE MONTHS ENDED MARCH 31, 2022 COMPARED TO MARCH 31, 2021. Other income (expense), net changed $2.6 million and $2.7 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 March 31,		YTD
In thousands	2022	2021	Change
NW Natural	$ 10,831	$ 10,790	$ 41
Other NW Holdings interest expense, net	691	336	355
NW Holdings	$ 11,522	$ 11,126	$ 396

THREE MONTHS ENDED MARCH 31, 2022 COMPARED TO MARCH 31, 2021. Interest expense, net was relatively flat at NW Natural and increased $0.4 million at NW Holdings. Interest expense, net at NW Natural decreased $0.4 million due to higher Allowance for Funds Used During Construction or AFUDC debt interest income, offset by $0.4 million of higher interest expense on short and long-term debt. The increase at NW Holdings is primarily due to higher interest expense on the credit facility at NW Holdings.

Income Tax Expense
Income tax expense highlights include:

	Three Months Ended March 31,		YTD
In thousands	2022	2021	Change
NW Natural income tax expense	$ 19,323	$ 20,552	$ (1,229)
NW Holdings income tax expense	$ 18,923	$ 20,521	$ (1,598)

THREE MONTHS ENDED MARCH 31, 2022 COMPARED TO MARCH 31, 2021. Income tax expense decreased $1.2 million at NW Natural and $1.6 million at NW Holdings. The decrease in income tax expense is primarily due to a decrease in pre-tax income.

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 March 31, 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, 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 General 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 General Rate Cases

OREGON. On October 16, 2020, the OPUC issued an order concluding NW Natural's general rate case filed in December 2019 (OPUC Order). The OPUC Order provides for a total revenue requirement increase of approximately $45 million over revenues from existing rates. The revenue requirement is based on the following assumptions:

- Capital structure of 50% common equity and 50% long-term debt;
- Return on equity of 9.4%;
- Cost of capital of 6.965%; and
- Average rate base of $1.44 billion or an increase of $242.1 million since the last rate case.

Under the terms of the OPUC Order, NW Natural was authorized to begin to recover the expense associated with the Oregon Corporate Activity Tax (CAT) as a component of base rates. See "*Corporate Activity Tax*" below.

In NW Natural's previous Oregon rate case in March 2019, the OPUC ordered specific terms by which excess deferred income taxes (EDIT) associated with the Tax Cuts and Jobs Act (TCJA) would be provided to customers directly or applied for the benefit of customers. The Order in the most recent Oregon rate case directs NW Natural to include a true-up credit to customers of approximately $1.0 million as a temporary rate adjustment to be amortized over the 2020-21 PGA year.

In addition, the OPUC Order 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.

New rates authorized by the OPUC Order were effective November 1, 2020.

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.

Regulatory Proceeding Updates

2022 OREGON GENERAL RATE CASE. On December 17, 2021, NW Natural filed a request for a general rate increase with the OPUC. The filing includes a requested $73.5 million annual revenue requirement increase based upon the following assumptions or requests:

- Capital structure of 50% long-term debt and 50% equity;
- Return on equity of 9.5%;
- Cost of capital of 6.886%; and
- Average rate base of $1.73 billion.

The filing includes an increase in average rate base of $294 million compared to the last rate case due to several long-planned investments by NW Natural including the following:

- Upgrading technology including our enterprise resource planning system, cybersecurity and other critical technology systems;
- Supporting distribution system reinforcement and expansion as well as enhancing the resilience of our operating facilities and systems; and
- Investing in components of our Mist storage facility, which provides service during peak winter heating months.

The filing requests an additional incremental revenue amount of $8.4 million primarily related to a renewable natural gas investment and technology upgrades and expenses, including cybersecurity items, that are not considered in NW Natural's annual revenue requirement.

NW Natural's filing will be reviewed by the OPUC and other stakeholders. The process is anticipated to take up to 10 months with new rates expected to take effect November 1, 2022.

Rate Mechanisms

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)	2019 Rate Case (effective 11/1/2019)	2021 Rate Case (effective 11/1/2021)
Authorized Rate Structure:			
Return on Equity	9.4%	9.4%	**
Rate of Return	7.0%	7.2%	6.8%
Debt/Equity Ratio	50%/50%	51%/49%	**
Key Regulatory Mechanisms:			
Purchased Gas Adjustment (PGA)	X	X	X
Gas Cost Incentive Sharing	X		
Decoupling	X		
Weather Normalization (WARM)	X		
Environmental Cost Recovery	X	X	X
Interstate Storage and Asset Management Sharing	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. NW Natural entered the 2021-22 gas year with its forecasted sales volumes hedged at approximately 79% in total. The total hedged for Oregon was approximately 82%, including 62% in financial hedges and 19% in physical gas supplies. The total hedged for Washington was approximately 57%, including 44% in financial hedges and 13% in physical gas supplies. During 2021, 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 2021, NW Natural increased its hedging level for the 2021-22 PGA year in Oregon to 82% compared to 74% in the 2020-2021 PGA year.

NW Natural is also hedged between 3% and 30% for annual requirements over the subsequent three gas years, which consists of between 4% and 27% in Oregon and between 0% and 50% 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 April 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 OR and WA which we anticipate filing later this year in September 2022.

In September 2021, NW Natural filed its annual PGA and received OPUC and WUTC approval in October 2021. PGA rate changes were effective November 1, 2021. 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 2021-22 and 2020-21 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. 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 March 31, 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 are to be 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 March 31, 2022, we believe that approximately $14.3 million of the financial effects related to COVID-19 are recoverable and deferred to a regulatory asset approximately $11.2 million for incurred costs. In addition, we expect to recognize revenue in a future period for an additional $3.1 million related to forgone late fee revenue.

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
Extended Time Payment Arrangements:			
Residential	Up to 24 months		Up to 18 months
Small Commercial	Up to 6 months		Up to 12 months
Arrearage Management Program	1.5% of Retail Revenues		1% of Retail Revenues

* Jurisdiction retains discretion to re-evaluate date based on ongoing pandemic and economic conditions.
** 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 deferral dockets. As of March 31, 2022, the amount granted and deferred to a regulatory asset related to the AMP was $6.1 million of the total funds available of $9.9 million.

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% renewable natural gas 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.

CORPORATE ACTIVITY TAX. In 2019, the State of Oregon enacted a Corporate Activity Tax (CAT) that is applicable to all businesses with annual Oregon gross revenue in excess of $1 million. The CAT is in addition to the state's corporate income tax and imposes a 0.57% tax on certain Oregon gross receipts less a reduction for a portion of cost of goods sold or labor. The CAT legislation became effective September 29, 2019 and applied to calendar years beginning January 1, 2020. Under the terms of the Order in NW Natural's 2020 Oregon general rate case, NW Natural is authorized to begin to recover the expense associated with the CAT as a component of base rates. NW Natural is also directed to adjust the amount recovered for the CAT in each annual PGA to reflect changes in gross revenue and cost of goods sold that occur as a result of the PGA.

The Order also provides for certain adjustments if there are legislative, rulemaking, judicial, or policy decisions that would cause the calculation methodology used by NW Natural for the CAT to vary in a fundamental way. Additionally, the CAT deferred from January 2020 through June 2020 was added to and amortized over the 2020-21 PGA gas year, and the CAT amounts deferred from July 2020 through the effective date of the rate case will be amortized over the 2021-22 PGA year.

WATER UTILITIES. In the first three months of 2022, NWN Water signed two purchase agreements for water utilities in Texas, representing approximately 900 connections. The acquisitions are subject to customary closing conditions, including approval by the Public Utility Commission of Texas, and are expected to close in 2022. In December 2021, NWN Water agreed to purchase the water and wastewater utilities of Far West Water & Sewer, Inc. located in Arizona. In March 2022, we filed our acquisition application with the Arizona Corporation Commission and a decision is expected toward the end of 2022.

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 has allowed rates to go into effect in May 2022 by operation of law.

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 2018 IRP for both Oregon and Washington in August 2018, and received both a letter of compliance from the WUTC and acknowledgment by the OPUC in February 2019. The 2018 IRP included analysis of different scenarios, examining several potential future states and the corresponding least cost, least risk resource acquisition strategies. In addition to these strategies, the 2018 IRP published an emissions forecast for each of these potential futures. NW Natural filed an update to the 2018 IRP in March 2021 and received acknowledgement of the requested capital projects by the OPUC in September 2021.

The development of an IRP filing is an extensive and complex process that engages multiple stakeholders in an effort to build a robust and commonly understood analysis. The final product is intended to provide a long-term outlook of the supply-side and demand-side resource and compliance requirements for reliable and low cost natural gas service. The IRP examines and analyses uncertainties in the planning process, including potential changes in governmental and regulatory policies. As a result of the executive order (EO) issued by the governor of Oregon, new regulations and requirements have been developed resulting in a new program known as the Climate Protection Plan. The Washington Department of Ecology is currently undergoing rule-making for the Climate Commitment Act. Both of these policies have the potential to impact long-term resource decisions. In order to reflect the outcomes of the EO proceedings, the time to file NW Natural's next full IRP was extended to July 2022 as approved by the OPUC and WUTC.

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. 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 March 31, 2022, NW Natural has deferred to a regulatory asset $1.6 million of costs incurred and $18.6 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. As of March 31, 2022, NW Natural deferred to a regulatory asset $7.3 million of expenses incurred to date. Approval of the Washington deferral was resolved as part of the most recent general rate case.

Environmental, Legislation and Regulation Matters

There is a growing international and domestic focus on climate change and the contribution of greenhouse gas (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, 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. Some of these initiatives may include repeal of policies, executive orders or rules implemented by the prior administration.

The U.S. Congress has not yet passed any federal climate change legislation and we cannot predict when or if Congress will pass such legislation and in what form. In the absence of such legislation, the Environmental Protection Agency (EPA) regulates GHG emissions pursuant to the Clean Air Act. In September 2009, the EPA issued a final rule requiring the annual reporting of greenhouse gas emissions from certain industries, specified large GHG emission sources, and facilities that emit 25,000 metric tons or more of CO_2 equivalents per year. NW Natural began reporting emission information in 2011. 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. Additionally, other federal regulatory agencies, including the Federal Energy Regulatory Commission, are beginning to address greenhouse gas emissions through changes in their regulatory oversight approach and policies.

Additionally, the Securities and Exchange Commission (SEC) recently 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, if final action is taken in November 2022 are expected to restrict or eliminate the use of gas space and water heating in new commercial construction beginning in July 2023. In May 2022, the SBCC is expected to begin reviewing building energy code updates for new residential construction that may include similar requirements. 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.

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.

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 been directed to develop rules to create a cap-and-invest program, under which entities, including natural gas and electric utilities, and transportation and other fuel providers, which are subject to the CCA must either reduce their emissions or obtain allowances to cover any remaining emissions. These rules are expected by the end of 2022. NW Natural is subject to the CCA and intends to pursue inclusion of CCA compliance costs in rates.

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) and OPUC, 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.

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. NW Natural is actively engaged with such cities, local governments, and other advocates, including, among others the city of Eugene, 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. Given that CCA rules are in development and the recency of the adoption of the final CPP rules, we have not completed our full integrated resources planning process to identify our compliance obligations and expected costs. Even as we develop these compliance and cost projections, they will be 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.

It is difficult to assess whether building code changes that could make the use of natural gas more expensive for home builders or higher customer bills as compliance costs are included in rates will affect the competitiveness of our business or result in a decline in demand for natural gas. Both developments could negatively affect our gas utility customer growth. 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 that 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. Yet, the sales of natural gas 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 powerful potential to reduce net GHG emissions. Methane that would otherwise be released to the atmosphere is captured from these organic materials as they decompose and is conditioned to pipeline quality, so it can be added into the existing natural gas 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 is engaging in longer-term efforts to increase the amount of RNG on our system and 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. In addition, 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:

	March 31,		December 31,
	2022	2021	2021
Common equity	48.6 %	49.5 %	47.2 %
Long-term debt (including current maturities)	51.4	50.5	52.8
Total	100.0 %	100.0 %	100.0 %

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

	March 31,		December 31,
	2022	2021	2021
Common equity	50.9 %	49.0 %	49.8 %
Long-term debt (including current maturities)	49.1	51.0	50.2
Total	100.0 %	100.0 %	100.0 %

Including short-term debt balances, as of March 31, 2022 and 2021, and December 31, 2021, NW Holdings' consolidated capital structure included common equity of 41.8%, 44.0% and 39.5%; long-term debt of 44.1%, 40.4% and 44.0%; and short-term debt including current maturities of long-term debt of 14.1%, 15.6% and 16.5%, respectively. As of March 31, 2022 and 2021, and December 31, 2021, NW Natural's consolidated capital structure included common equity of 46.5%, 44.7%, and 44.2%; long-term debt of 44.9%, 43.4% and 44.7%; and short-term debt including current maturities of long-term debt of 8.6%, 11.9%, and 11.1%, respectively.

Liquidity and Capital Resources

At March 31, 2022 and 2021, NW Holdings had approximately $24.3 million and $17.9 million, and NW Natural had approximately $10.2 million and $10.4 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 rise. 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 estimated expenses payable by NW Holdings of approximately $138.6 million. The proceeds are to be 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 quarter ended March 31, 2022, NW Holdings issued and sold 195,901 shares of common stock pursuant to the ATM equity program resulting in cash proceeds of $10.1 million, net of fees and commissions paid to agents of $0.3 million. As of March 31, 2022, NW Holdings had issued and sold 571,621 shares of common stock pursuant to the ATM equity program resulting in cash proceeds of $27.6 million, net of fees and commissions paid to agents of $0.7 million.

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. Through April 2022, NW Holdings issued approximately $150 million of equity. 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 March 31, 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 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 March 31, 2022. If the credit risk-related contingent features underlying these contracts were triggered on March 31, 2022, assuming NW Natural's long-term debt ratings dropped to non-investment grade levels, we would not be required to post collateral with counterparties, including estimates for adequate assurance. 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. NW Holdings and NW Natural have separate bank facilities, and NW Natural has a commercial paper program. In addition to issuing commercial paper or 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.

In June 2021, NW Natural entered into a $100.0 million 364-Day Term Loan Credit Agreement (Term Loan) and borrowed the full amount. All principal and interest under the Term Loan was repaid in December 2021.

At March 31, 2022 and 2021, NW Holdings had short-term debt outstanding of $332.5 million and $236.2 million, respectively. At March 31, 2022 and 2021, NW Natural had short-term debt outstanding of $188.5 million and $175.2 million, respectively. NW Holdings' short-term debt at March 31, 2022 consisted of $144.0 million in revolving credit agreement loans at NW Holdings and $188.5 million of commercial paper outstanding at NW Natural. The weighted average interest rate on the revolving credit agreement at March 31, 2022 was 1.5% at NW Holdings. The weighted average interest rate of commercial paper at March 31, 2022 was 0.8% at NW Natural.

Credit Agreements

NW Holdings

At March 31, 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 March 31, 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 March 31, 2022, March 31, 2021 and December 31, 2021, $144.0 million, $61.0 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 March 31, 2022 and 2021, with consolidated indebtedness to total capitalization ratios of 58.2% and 56.0%, 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 March 31, 2022 and 2021.

NW Natural

At March 31, 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 March 31, 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 March 31, 2022, March 31, 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 March 31, 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 March 31, 2022 and 2021, with consolidated indebtedness to total capitalization ratios of 53.5% and 55.3%, 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 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, NW Natural 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 1.2% at March 31, 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 March 31, 2022, with a consolidated indebtedness to total capitalization ratio of 58.2%.

At March 31, 2022, NW Holdings and NW Natural had long-term debt outstanding of $1,045.0 million and $986.6 million, respectively, which included $8.2 million and $8.1 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 2051, interest rates ranging from 2.8% to 7.9%, and a weighted average interest rate of 4.4%.

No long-term debt is scheduled to mature over the next twelve months as of March 31, 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 in connection with the holding company reorganization, 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 March 31, 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.

	Three Months Ended March 31,		
In thousands	2022	2021	YTD Change
NW Natural cash provided by operating activities	$ 138,230	$ 136,273	$ 1,957
NW Holdings cash provided by operating activities	$ 141,037	$ 137,065	$ 3,972

THREE MONTHS ENDED MARCH 31, 2022 COMPARED TO MARCH 31, 2021. Cash provided by operating activities increased $4.0 million at NW Holdings and increased $2.0 million at NW Natural. The significant factors contributing to the increase at NW Holdings were as follows:

- $40.6 million decrease in net deferred gas costs as the actual costs for the three months ended March 31, 2022 were 5% above the PGA estimates as opposed to gas costs for the three months ended March 31, 2021 that were 33% above the PGA estimates primarily due to the 2021 cold weather event; and
- $37.6 million decrease in accounts receivable and accrued unbilled revenue resulting from higher balances at March 31, 2022 compared to March 31, 2021; and
- $7.4 million decrease in inventories; partially offset by
- $35.3 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;
- $32.0 million increase in asset optimization revenue sharing bill credits to customers; and
- $14.2 million decrease in accounts payable.

NW Natural did not make any cash contributions to its qualified defined benefit pension plans during the three months ended March 31, 2022 compared to $4.5 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 the increase 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

	Three Months Ended March 31,		
In thousands	2022	2021	YTD Change
NW Natural cash used in investing activities	$ (65,553)	$ (62,229)	$ (3,324)
NW Holdings cash used in investing activities	$ (69,750)	$ (63,875)	$ (5,875)

THREE MONTHS ENDED MARCH 31, 2022 COMPARED TO MARCH 31, 2021. Cash used in investing activities increased $5.9 million at NW Holdings and increased $3.3 million at NW Natural. The increase at NW Natural is primarily due to a decrease of $1.8 million in proceeds from the sale of assets. NW Holdings' increase in cash used in investing activities was primarily due to an increase of $2.8 million of capital expenditures at NW Natural Water.

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

	Three Months Ended March 31,		
In thousands	2022	2021	YTD Change
NW Natural cash used in financing activities	$ (72,026)	$ (71,760)	$ (266)
NW Holdings cash used in financing activities	$ (62,764)	$ (83,132)	$ 20,368

THREE MONTHS ENDED MARCH 31, 2022 COMPARED TO MARCH 31, 2021. Cash used in financing activities decreased $20.4 million and increased $0.3 million at NW Holdings and NW Natural, respectively. The cash used in financing activities decreased at NW Holdings due to lower repayments of short-term debt and cash proceeds from the ATM equity program.

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 March 31, 2022, NW Natural's total estimated liability related to environmental sites is $109.1 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. This section describes NW Holdings' and NW Natural's exposure to these risks, as applicable. 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 three months ended March 31, 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).

There have been no changes in NW Natural's or NW Holdings' internal control over financial reporting that occurred during the quarter ended March 31, 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 March 31, 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
01/01/22-01/31/22	—	—	—	—
02/01/22-02/28/22	—	—	—	—
03/01/22-03/31/22	9,963	$ 55.76	—	—
Total	9,963	$ 55.76	2,124,528	$ 16,732,648

(1) During the quarter ended March 31, 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, 9,963 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 March 31, 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 March 31, 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. 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 March 31, 2022

Exhibit Index

Exhibit Number	Document
*3.1	Amended and Restated Bylaws of Northwest Natural Holding Company (incorporated by reference to Exhibit 3c to Form 10-K for the year ended December 31, 2021)
*3.2	Amended and Restated Bylaws of Northwest Natural Gas Company (incorporated by reference to Exhibit 3d to Form 10-K for the year ended December 31, 2021)
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 March 31, 2022, formatted in Inline XBRL.

* Incorporated by reference as indicated
** Pursuant to Item 601(b)(32)(ii) of Regulation S-K, this certification is not being 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: May 4, 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: May 4, 2022

/s/ Brody J. Wilson

Brody J. Wilson

Principal Accounting Officer
Vice President, Treasurer, Chief Accounting Officer and Controller