BEFORE THE					
WASHINGTON UTILITIES & TRANSPORTATION COMMISSION					
UG					
GENERAL RATE APPLICATION					
OF					
NORTHWEST NATURAL GAS COMPANY					
December 31, 2018					
Direct Exhibit of Brody J. Wilson					
COST OF CAPITAL					
Exh. BJW-3					

S&P Global Ratings

Research

Summary:

Northwest Natural Gas Co.

Primary Credit Analyst:

Safina Ali, CFA, New York (1) 212-438-1877; safina.ali@spglobal.com

Secondary Contact:

Gerrit W Jepsen, CFA, New York (1) 212-438-2529; gerrit jepsen@spglobal.com

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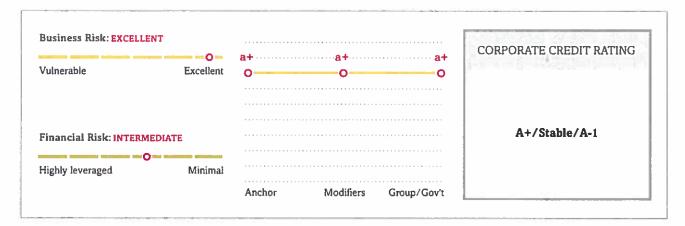
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Summary:

Northwest Natural Gas Co.



Rationale

Business Risk: Excellent

- Primarily low-risk natural gas distribution operations with limited unregulated storage operations.
- Strong service territory with modest regulatory and economic diversity.
- Unregulated businesses help mitigate volatility in natural gas pricing, but are subject to some commodity risk.
- Multiple regulatory mechanisms help recover costs on a timely basis.

Financial Risk: Intermediate

- Leverage and cash flow measures consistent with an intermediate financial risk profile.
- Elevated capital spending in 2017 related to the expansion of the Mist storage facility.
- Dividend payout ratio moderately higher than industry averages.
- Negative discretionary cash flow over the next few years, indicating external funding needs.

Outlook: Stable

S&P Global Ratings' stable rating on Portland, Ore.-based Northwest Natural Gas Co. (NWN) reflects our expectation of strong financial and operating performance and regulatory support over the next two years. We expect funds from operations (FFO) to debt to be between 18% and 20% during this period.

Downside scenario

Ratings pressure could occur over the next two years if FFO to debt consistently drops below 15%. This could occur if the company relies heavily on external financing to fund cash shortfalls, if investments in unregulated operations exceed our expectations, or cash flows suffer due to mismanagement of regulatory risk.

Upside scenario

Although unlikely over the next two years, we could raise the ratings if the company improves financial measures on a sustained basis, including FFO to debt of more than 23%. This could occur through strengthened operating cash flow or reduced debt leverage.

Our Base-Case Scenario

Assumptions

- Low- to mid-single-digit annual-gross-margin growth in 2017 and 2018.
- Capital spending of about \$160 million annually with a peak of about \$250 million in 2017.
- · Dividends in excess of \$50 million per year.
- Cost recovery remains adequate through base rates and rate surcharges.
- Debt maturities refinanced.
- Negative discretionary cash flow from 2017 onward indicates external funding needs.

Key Metrics

	2016A	2017E	2018E
FFO to debt (%)	21.3	17-20	17-20
OCF to debt (%)	26.2	17-20	16-19
Debt to EBITDA (x)	3.6	3.9-4.3	3.9-4.3

S&P Global Ratings' adjusted figures. A--Actual. E--Estimate. FFO--funds from operations. OCF--Operating cash flow.

Business Risk: Excellent

We assess NWN's business risk based on the company's very low risk regulated gas distribution operations (accounts for about 90%-95% of consolidated cash flows) and its unregulated natural gas storage business, where we ascribe higher risk. About 90% of NWN's roughly 725,000 customers are in Oregon, primarily in the Salem and Portland metropolitan areas, remainder in Washington. The company benefits from stable and supportive regulatory environments in both of the jurisdictions it operates in, with purchased gas adjustments and environmental cost deferral in both jurisdictions, and decoupling, forward-looking test years, and weather normalization mechanisms in Oregon. These mechanisms reduce regulatory lag in collection of associated costs and help bolster cash flow stability

outside of rate cases. The utility's cash flows are further stabilized by a large, stable residential customer base (about 90% of all customers) with limited exposure to more cyclical commercial and industrial customers. A history of safe and reliable services also strengthens the company's business profile.

NWN's non-utility cash flows are mostly from its Mist and Gill Ranch storage facilities, which have contributed between 5% and 10% of annual operating income. The company is expanding its gas storage facility by 2.5 Bcf at Mist, Oregon, to provide storage services to Portland General Electric Co.'s (PGE) natural gas power plants under a 30-year contract with revenues recovered through an established tariff schedule. We consider the cash flow from this asset to be fairly reliable given the essential nature of the service it provides. The investment in the Gill Ranch natural gas storage facility near Fresno, Calif., is riskier because it is outside of Oregon and faces competition. Gill Ranch enters into a mix of short- and medium-term contracts for the large majority of its total storage capacity.

After factoring in these components, we view NWN's business risk profile at the stronger end of the excellent category, supported by the company's ability to effectively manage the regulatory process, which helps support higher and more stable profitability.

Financial Risk: Intermediate

Under our base-case scenario, with elevated capital spending in 2017 to support the Mist expansion, modestly rising dividend payments, and cost recovery through various regulatory mechanisms and rate cases, we expect the company's FFO to debt measures will be about 18%-20% in 2017 and 2018. Since the range of projected FFO to total debt is solidly in the middle of the intermediate financial risk profile category, it supports a modest cushion to the ratings. We assess NWN's financial risk profile based on financial ratios that are measured against the most relaxed benchmarks used for corporate issuers, reflecting the low-risk nature of the company's natural gas distribution operations in supportive regulatory environments. We assume that NWN will continue to manage regulatory risk well and fully recover capital spending on a timely basis.

Liquidity: Adequate

We assess liquidity as adequate for Northwest Natural Gas Co. because we believe sources are likely to cover uses by more than 1.1x over the next 12 months. We also project sources will meet cash outflows even in the event of a 10% decline in EBITDA. The adequate assessment also reflects the company's generally prudent risk management, sound relationships with banks, and generally satisfactory standing in credit markets.

Principal Liquidity Sources

Principal Liquidity Uses

- · Forecast cash FFO of about \$180 million
- Revolving credit facilities of about \$300 million.
- Debt maturities, including outstanding commercial paper, of about \$90 million
- Capital spending of about \$225 million
- Dividends of about \$55 million.

Other Credit Considerations

Other modifiers have no effect on the rating outcome.

Group Influence

NWN is subject to the group rating methodology criteria. We view NWN as the parent and driver of the group credit profile. As a result, NWN's group and stand-alone credit profiles are the same at 'a+'.

Recovery Analysis/Issue Rating

NWN's first mortgage bonds benefit from a first-priority lien on substantially all of the utility's real property owned or subsequently acquired. Collateral coverage of more than 1.5x supports a recovery rating of '1+' and an issue rating one notch above the issuer credit rating.

The short-term rating on NWN is 'A-1' based on the issuer credit rating and our assessment of its liquidity as at least adequate.

Ratings Score Snapshot

Corporate Credit Rating

A+/Stable/A-1

Business risk: Excellent

Country risk: Very lowIndustry risk: Very low

• Competitive position: Strong

Financial risk: Intermediate

Cash flow/Leverage: Intermediate

Anchor: a+

Modifiers

• Diversification/Portfolio effect: Neutral (no impact)

Capital structure: Neutral (no impact)

• Financial policy: Neutral (no impact)

• Liquidity: Adequate (no impact)

• Management and governance: Satisfactory (no impact)

Comparable rating analysis: Neutral (no impact)

Stand-alone credit profile: a+

• Group credit profile: a+

Related Criteria And Research

- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria Corporates General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers,
 Dec. 16, 2014
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Criteria Corporates Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19,2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- Criteria Corporates General: Corporate Methodology, Nov. 19, 2013
- Criteria Corporates Utilities: Collateral Coverage And Issue Notching Rules For '1+' And '1' Recovery Ratings On Senior Bonds Secured By Utility Real Property, Feb. 14, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- Criteria Corporates General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009
- Debt Now Better Reflects Anticipated Absolute Recovery, Nov. 10, 2008
- Utilities: Notching Of U.S. Investment-Grade Investor-Owned Utility Unsecured, Nov. 10, 2008
- Criteria Corporates General: 2008 Corporate Criteria: Rating Each Issue, April 15, 2008

Business Risk Profile	Financial Risk Profile						
	Minimal	Modest	Intermediate	Significant	Aggressive	Highly leveraged	
Excellent	aaa/aa+	aa	a+/a	a-	bbb	bbb-/bb+	
Strong	aa/aa-	a+/a	a-/bbb+	bbb	bb+	bb	
Satisfactory	a/a-	bbb+	bbb/bbb-	bbb-/bb+	bb	b+	
Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b	
Weak	bb+	bb+	bb	bb-	b+	b/b-	
Vulnerable	bb-	bb-	bb-/b+	b+	ь	b-	

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