BEFORE THE
STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of

National Fuel Gas Distribution Corp.

Case 16-G-0257

September 2016

Prepared Supplemental Exhibits of:

Staff Finance Panel

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23 August 2016

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Independent Exploration and Production – North America

No Relief in Sight for Stretched Balance Sheets in 2016

» **Leverage for the exploration and production (E&P) sector continues to be elevated and will see no relief in 2016.** E&P companies began the current downturn in mid/late 2014 with much higher debt levels and leverage, with today's low commodity prices making development unsustainable for many companies. Companies have addressed their balance sheets by issuing equity, selling assets, cutting dividends, repaying debt, or some combination of these actions.

» **Among the 35 E&P companies we studied, we project that total production will drop by 4% in 2016, following a 6% increase in 2015, but 12 of the 35 companies will increase their production this year.** Our study evaluated metrics under two scenarios: a scenario with North American benchmark oil prices averaging $40/barrel (bbl), natural gas at $2.25/thousand cubic feet (mcf), and natural gas liquids (NGLs) at $16/bbl in 2016 and a higher-price scenario with oil averaging $50/bbl, natural gas $3.00/mcf, and NGLs $20/bbl.

» **Aggregate total debt for the peer group will decline by 2%-3% in 2016 from 2015 levels under our price scenarios for this study, but will still remain high compared to 2011-13 levels.** We expect the companies' aggregate cash holdings to climb under either price scenario, while capital spending will continue to decline very sharply in 2016 for a second year as companies wait for sustained oil prices of at least $50/bbl.

» **We forecast that EBITDA for the companies we surveyed will fall by 38% in 2016 from 2015 levels under our lower price scenario, and by 22% under the higher prices.** Overall ratios of EBITDA/interest will decline to 4.9x in 2016 from 7.1x in 2015, and retained cash flow (RCF) to total debt will decline to 18%, compared to 28% in 2015.

» **Leverage among the E&P companies we surveyed has more than quadrupled since 2011, and will continue to get worse in 2016 under either price scenario, despite myriad actions to raise cash and fortify balance sheets.** Assuming Scenario 1's prices for the second half of 2016, total leverage (debt/EBITDA) would worsen to 4.3x,

THIS REPORT WAS REPUBLISHED ON 2 SEPTEMBER 2016 TO CORRECT ONE ISSUER'S TOTAL DEBT/EBITDA RATIOS UNDER BOTH 2016 PRICE SCENARIOS, AFFECTING THE AVERAGE RATIOS FOR THE STUDY. THE RATIOS ARE NOW UPDATED THROUGHOUT THE TEXT, IN EXHIBIT 6, AND IN THE APPENDIX.

compared to 2.7x for 2015, and net leverage to 3.7x, up from 2.4x. Under the higher commodity prices of Scenario 2, total and net leverage would each tick up by less than a turn.

Remedies for Weakening Leverage Will Not Entirely Offset Commodity Prices in 2016

Leverage for the North American E&P sector remains elevated, despite a modest improvement in oil and natural gas prices, and will not improve before the end of 2016. E&P companies began the current downturn in mid/late 2014 with much higher debt levels and leverage, with today's low commodity prices making development unsustainable for many companies. Even at $40-$50/bbl of oil, cash flow is mismatched to debt loads for most E&P companies, and the lowest-rated companies continue to default even as commodity prices rebound somewhat. (See our most recent quarterly report, "US Corporate Default Monitor - Second Quarter 2016: Defaults Stay Elevated as Risk Indicators Argue for Continued Caution," 31 July 2016.)

While we raised our oil price estimates in June 2016 in light of modest improvement since the start of the year, our medium-term expectations continue to foresee a global oversupply, albeit one that may shrink as US shale production declines. As of mid-August 2016, prices for West Texas Intermediate (WTI), the North American benchmark crude, were about $48/bbl while natural gas at the Henry Hub, the North American natural gas benchmark, was about $2.60/mcf.

Companies have been seeking remedies to become more efficient in finding and replacing reserves, reducing costs and preventing their leverage from creeping higher. We examined a variety of past and estimated future metrics under two different price scenarios, primarily focusing on leverage, for 35 large US and Canadian E&P companies that we rated between A2 and Ba3 before placing them on review for downgrade in December 2015.

We studied the companies under two different price scenarios for the second half of 2016, calculating leverage ratios at our 2016 estimated prices of $40/bbl for WTI, $2.25/mcf for Henry Hub, and $16/bbl for NGLs, and $50/bbl, $3.00/mcfe, and $20/bbl in a hypothetical higher-price scenario. We incorporated each company's latest guidance regarding production, capital spending and production costs. Our price estimates are meant for sensitivity analysis to help calculate the potential impact of an E&P company's likely actions on its leverage metrics.

Responses to Address Weaker Leverage Have Varied

We have seen a wide range of responses to the industry downturn across the North American E&P sector, and we studied how such actions would affect the companies' leverage profiles in 2016 under two different price scenarios for the second half of 2016.

Companies including Apache (Baa3 negative), Cenovus (Ba2 stable) and Encana (Ba2 stable) aggressively cut costs, while ConocoPhillips (Baa2 negative) cut its dividend by two-thirds, and Husky (Baa2 stable) eliminated its dividend altogether. Pioneer Natural Resources (Baa3 stable), Hess (Ba1 stable) and Marathon Oil (Ba1 negative) all issued equity to help increase cash, while Anadarko (Ba1 negative) improved its liquidity by selling assets.

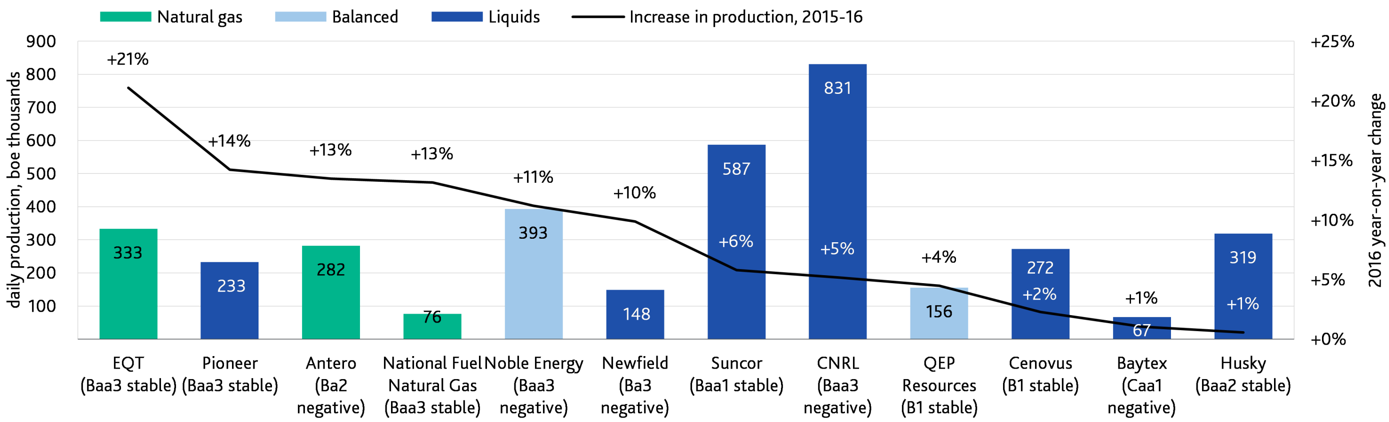
Others fixed their balance sheets more aggressively with combinations of asset sales, equity issuance, dividend cuts and debt repayments. Devon Energy (Ba2 stable) bested its $2-3 billion asset sale target with the $1.1 billion sale of Access Pipeline sale, divesting $3.2 billion since January 2016. Devon has also announced a $1.2 billion tender offer for its 2018 and 2019 bonds. Southwestern Energy (Ba3 stable) completed a $1.25 billion equity offering in July 2016 and sold $450 million in assets to repay its term loan and tender for its 2018 bonds. Meanwhile, Husky bolstered its liquidity with the sale of assets in Saskatchewan for CAD791 million ($614 million) and sold its midstream business for CAD1.7 billion. However, it also opened the door to the possible resumption of its dividend. Interestingly, Range Resources (Ba3 negative) announced it would acquire MRD (B2 RUR) for $4.4 billion, an all-stock transaction that should improve Range's credit profile, especially given MRD's lower leverage.

Even Under Stronger Price Scenario, Key E&P Metrics Set to Deteriorate Further in 2016

Total production for the peer group increased by 6% in 2015, above the 4% compound annual growth rate of 2011-14, but we project their aggregate production will decline by 4% in 2016. Twenty-two of the 35 companies we studied will post year-over-year production declines in 2016, but we expect to see production grow for 12 companies (see Exhibit 1).

Exhibit 1

Production Will Grow in 2016 for 12 of 35 Surveyed E&P Companies

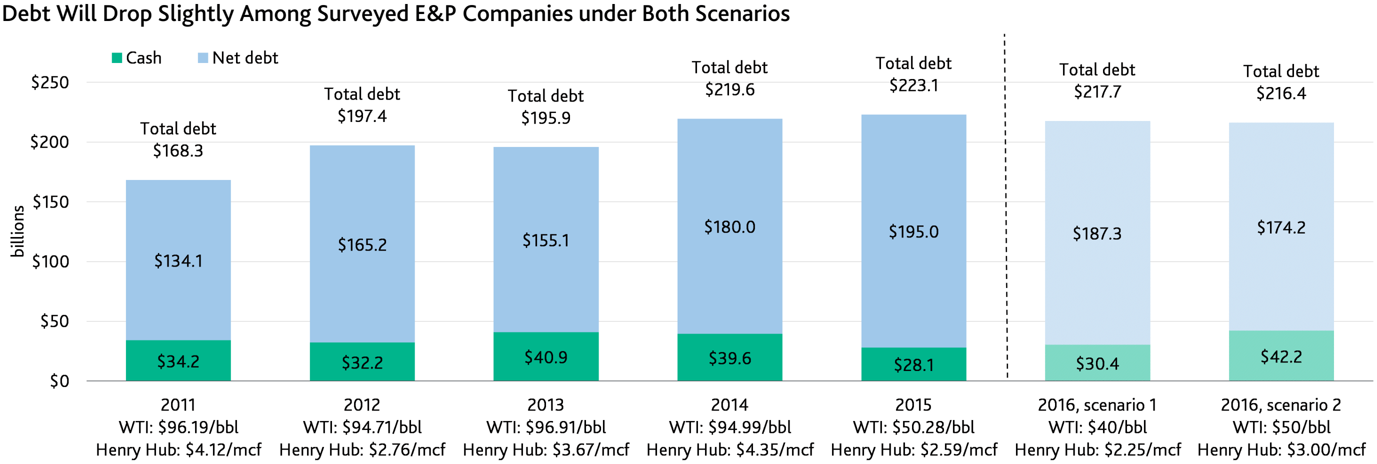


Source: Moody's Financial Metrics; Moody's Investors Service

Aggregate **total debt** for the peer group will decline by 2% under Scenario 1 and 3% under Scenario 2 versus 2015 levels, but will still remain high compared to 2011-13 levels. We expect the companies' aggregate cash holdings to climb to $30 billion under Scenario 1 and $42 billion under Scenario 2 (see Exhibit 2), considering asset sales, equity sales, dividend, capital spending cuts and the commodity prices we assumed for each scenario.

Exhibit 2

Debt Will Drop Slightly Among Surveyed E&P Companies under Both Scenarios

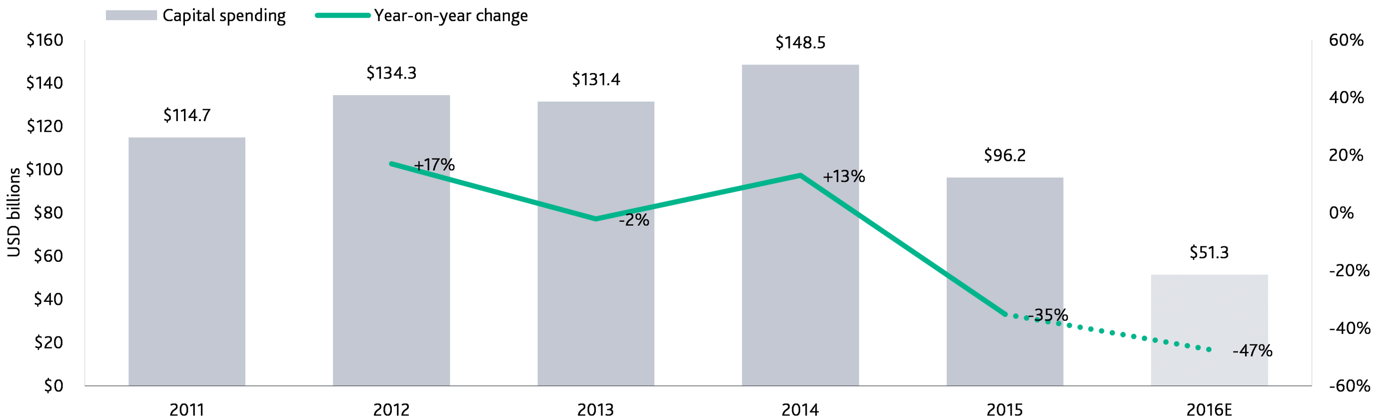


Source: Moody's Financial Metrics; Moody's Investors Service

We expect **capital spending** in 2016 to fall to $51.3 billion in aggregate—a 47% decline from 2015, when companies also cut capital investment (see Exhibit 3) in response to weak oil prices. But the decline in capital spending shouldn't persist if commodity prices improve. Many companies will ramp up production and capital spending once WTI prices reach a sustainable $50/bbl. Aggregate EBITDA and capital spending are roughly equal under Scenario 1, which suggests that companies are generating negative free cash flow with oil prices at $40/bbl, natural gas at $2.25/mcf, and NGLs at $16/bbl.

Exhibit 3

Capital Spending Dropping For Second Consecutive Year in 2016

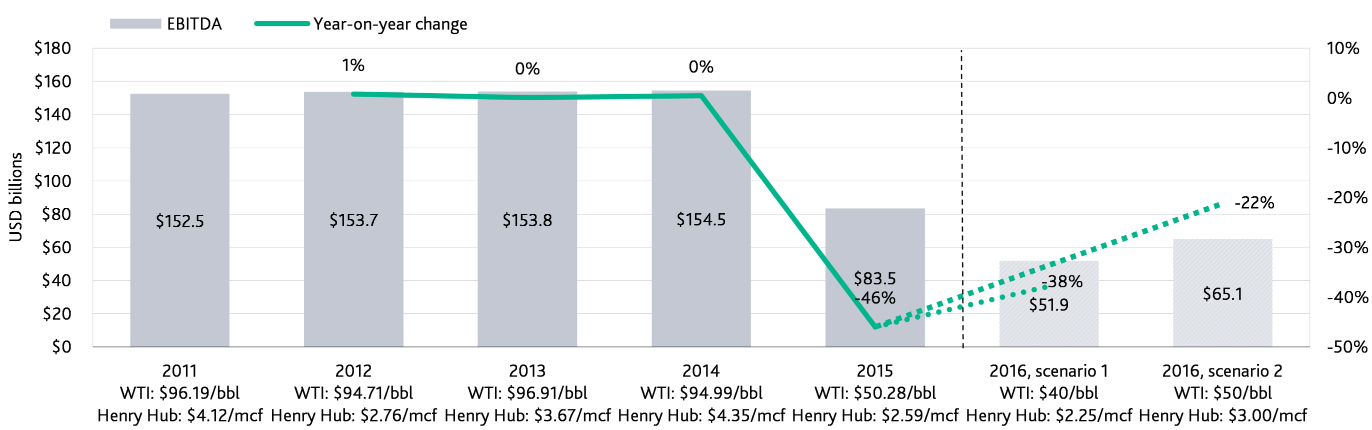


Source: Moody's Financial Metrics; Moody's Investors Service

We forecast that 2016 **EBITDA** for this group of companies will fall by 38% in 2016 from 2015 levels under Scenario 1, and by 22% under Scenario 2 (see Exhibit 4), mostly due to the $10/bbl differential in WTI oil prices, $0.75/mcf in Henry Hub prices and $4/bbl in NGL prices, offset by a modest decline in production. But the overall drop in either scenario will be smaller than in 2015. In this study we found that Marathon Oil, Hilcorp (Ba1 stable), Anadarko Petroleum, Southwestern and Canadian Natural Resources (Baa3 negative) were the most sensitive to oil and natural gas prices.

Exhibit 4

Annual EBITDA to Continue Declining in 2016

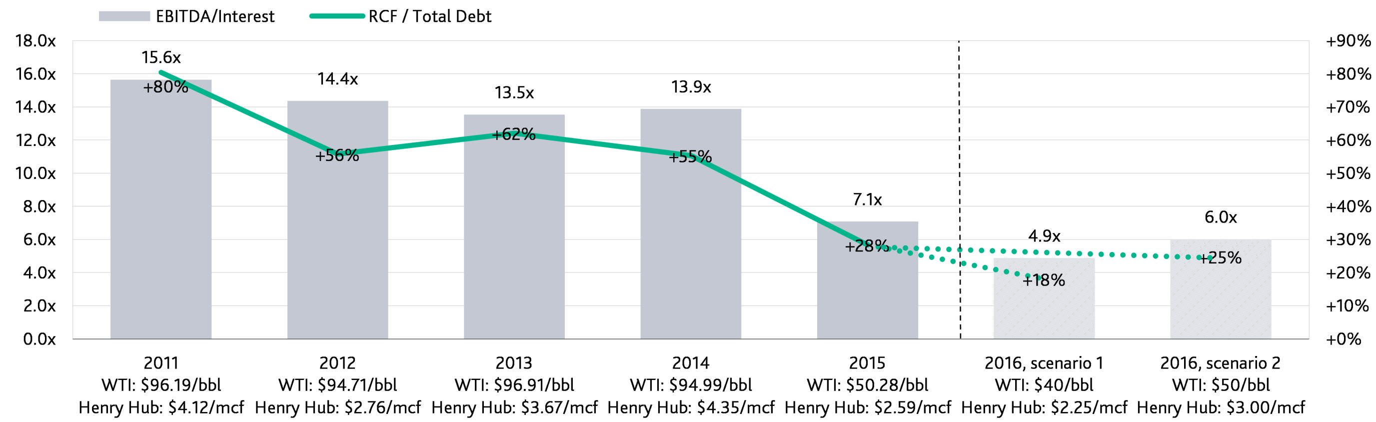


Source: Moody's Financial Metrics; Moody's Investors Service

Among the companies we surveyed, under Scenario 1, we expect the overall ratio of EBITDA/interest to decline to 4.9x in 2016 from 7.1x in 2015, and the ratio of RCF to total debt to decline to 18%, compared to 28% in 2015. Even under the higher prices of Scenario 2, both measures would still drop from 2015 levels, though not as sharply (see Exhibit 5). Again, these ratios are markedly weaker than those of 2011-2014.

Exhibit 5

Interest Coverage and RCF/Debt Ratios Will Both Weaken in 2016

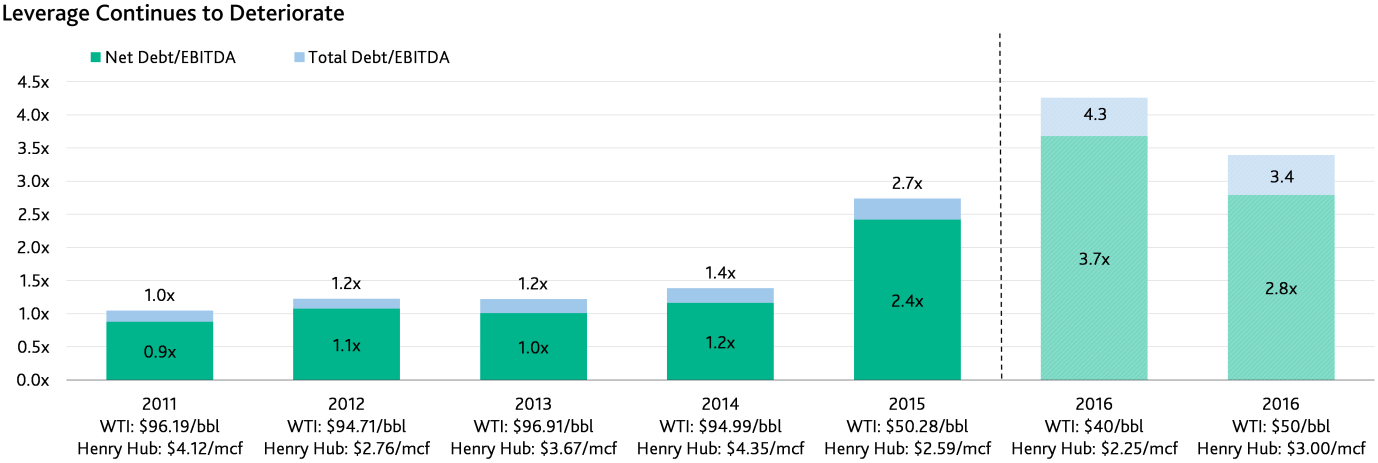


Source: Moody's Financial Metrics; Moody's Investors Service

Finally, **leverage** among the E&P companies we surveyed has more than quadrupled since 2011, and will continue to get worse in 2016 under either price scenario (see Exhibit 6), despite companies' myriad actions to raise cash and fortify balance sheets. If all else remains equal, leverage rises as commodity prices and EBITDA fall, and since 2011, WTI oil prices have dropped by 58% and Henry Hub natural gas prices by 45%. Assuming Scenario 1's prices of $40/bbl oil, $2.25/mcf natural gas, and $16/bbl NGLs for the second half of 2016, total leverage ratios—or total debt/EBITDA—would worsen to an average 4.3x, compared to 2.7x for 2015, and net leverage would weaken to 3.7x from 2.4x in 2015. Under the higher commodity prices of Scenario 2, total and net leverage would each tick up as well, but by less than a turn.

Exhibit 6

Leverage Continues to Deteriorate



Source: Moody's Financial Metrics; Moody's Investors Service

The Appendix (next page) details our 2016 leverage projections for each of the 35 companies in this study. Of the 35 companies we studied, 12 are investment-grade and 23 high-yield. The two broad rating classes show significant differences in leverage under our two scenarios. For Scenario 1, investment-grade companies show a year-on-year increase of almost a full turn in leverage—3.4x total and 2.8x net. High-yield companies are even worse off, with 4.7x total leverage and 4.1x net leverage—marking a total increase of 1.8x and a net increase of 1.5x compared to 2015.

For the higher oil and natural gas prices under Scenario 2, leverage for investment-grade companies weakens modestly from 2015 levels, with total leverage increasing by 0.6x to 2.8x, and net leverage by 0.4x to 2.1x. On the other hand, high-yield companies' total leverage would be 0.8x higher than in 2015, at 3.7x, and net leverage 0.5x higher.

Appendix: Leverage Projections for 2016

Exhibit 7

Leverage Projections for E&P Companies in Study

Company	Rating	Production weight	domicile	2015 average leverage		2016 leverage, scenario 1 WTI: $40/bbl Henry Hub: $2.25/mcf		2016 leverage, scenario 2 WTI: $50/bbl Henry Hub: $3.00/mcf	
				Total Debt to EBITDA	**Net Debt to EBITDA**	**Total Debt to EBITDA**	**Net Debt to EBITDA**	**Total Debt to EBITDA**	**Net Debt to EBITDA**
Anadarko Petroleum Corporation	Ba1	Bal	US	3.5x	3.3x	5.5x	5.4x	3.7x	3.4x
Antero Resources Corporation	Ba2	Gas	US	4.2x	4.2x	3.3x	3.1x	3.4x	3.2x
Apache Corporation	Baa3	Liq	US	3.0x	2.6x	4.3x	3.7x	3.5x	2.8x
Baytex Energy	Caa1	Liq	CAD	2.9x	2.9x	5.6x	5.6x	4.9x	4.8x
Canadian Natural Resources Limited	Baa3	Liq	CAD	2.8x	2.7x	5.1x	5.1x	3.7x	3.5x
Cenovus Energy Inc.	Ba2	Liq	CAD	4.5x	2.1x	5.1x	2.6x	4.5x	2.2x
Cimarex Energy Co.	Baa3	Bal	US	2.0x	1.0x	2.5x	1.7x	2.0x	1.1x
Concho Resources Inc.	Ba1	Liq	US	2.0x	1.9x	2.5x	2.5x	2.2x	2.2x
ConocoPhillips	Baa2	Bal	US	3.2x	3.0x	5.4x	4.7x	4.0x	3.3x
Continental Resources, Inc.	Ba3	Liq	US	3.8x	3.8x	5.0x	5.0x	3.5x	3.5x
Denbury Resources Inc.	Caa2	Liq	US	3.6x	3.6x	8.2x	8.2x	6.3x	6.3x
Devon Energy Corporation	Ba2	Liq	US	2.6x	2.1x	6.0x	5.1x	4.6x	3.7x
Encana Corporation	Ba2	Gas	CAD	3.0x	2.8x	5.0x	4.8x	4.0x	3.6x
Energen Corporation	Ba3	Liq	US	1.1x	1.1x	2.9x	1.1x	2.0x	0.5x
EOG Resources	Baa1	Liq	US	1.8x	1.6x	3.1x	2.9x	2.5x	2.1x
EP Energy LLC	Caa1	Liq	US	3.0x	3.0x	4.0x	4.0x	3.8x	3.8x
EQT Corporation	Baa3	Gas	US	2.4x	1.3x	2.5x	1.1x	2.2x	0.9x
Hess Corporation	Ba1	Liq	US	2.7x	1.7x	5.0x	3.6x	3.8x	2.5x
Hilcorp Energy	Ba1	Bal	US	1.0x	0.9x	2.2x	1.9x	1.1x	1.0x
Husky Energy Inc.	Baa2	Liq	CAD	1.9x	1.9x	3.8x	3.2x	3.2x	2.6x
Marathon Oil Corporation	Ba1	Liq	US	3.2x	2.7x	6.4x	4.2x	3.9x	2.2x
Murphy Oil Corporation	Ba3	Liq	US	2.3x	2.0x	4.1x	3.8x	3.1x	2.6x
National Fuel Gas Company	Baa3	Gas	US	2.8x	2.8x	2.9x	2.6x	2.7x	2.4x
Newfield Exploration Company	Ba3	Liq	US	2.2x	2.1x	3.6x	3.6x	3.1x	3.1x
Noble Energy, Inc.	Baa3	Bal	US	3.0x	2.6x	3.8x	3.2x	3.3x	2.7x
Occidental Petroleum Corporation	A3	Liq	US	1.7x	1.2x	1.9x	1.6x	1.5x	1.1x
Pioneer Natural Resources Company	Baa3	Liq	US	2.4x	1.6x	2.0x	0.7x	1.7x	0.5x
QEP Resources, Inc.	B1	Bal	US	2.2x	1.9x	3.4x	3.0x	2.6x	2.1x
Range Resources	Ba3	Gas	US	3.2x	3.2x	3.8x	3.6x	3.5x	3.2x
SM Energy Company	B2	Bal	US	2.4x	2.4x	3.8x	3.8x	3.2x	3.1x
Southwestern Energy Company	Ba3	Gas	US	3.4x	3.4x	7.5x	6.2x	5.2x	4.0x
Suncor Energy Inc.	Baa1	Liq	CAD	1.9x	1.4x	3.3x	3.0x	2.8x	2.3x
Unit Corp.	B2	Bal	US	2.8x	2.8x	3.6x	3.6x	2.9x	2.7x
Whiting Petroleum Corporation	B3	Liq	US	3.9x	3.9x	6.0x	6.0x	4.8x	4.8x
WPX Energy, Inc.	B2	Gas	US	3.4x	3.3x	5.9x	4.6x	5.6x	4.3x
Average for All 35 Companies				**2.7x**	**2.4x**	**4.3x**	**3.7x**	**3.4x**	**2.8x**
Average for Investment Grade Companies				**2.4x**	**2.0x**	**3.4x**	**2.8x**	**2.8x**	**2.1x**
Average for High Yield Companies				**2.9x**	**2.7x**	**4.7x**	**4.1x**	**3.7x**	**3.2x**

Note: Total debt-toEBITDA ratios under both scenarios updated on 2 September 2016 for Baytex Energy, average for all 35 companies, and average for high-yield companies.
Source: Moody's Financial Metrics; Moody's Investors Service

Moody's Related Research

Outlooks:

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» Energy Industry and Oil-Exporting Sovereigns – Global: Energy-Related Stress Continues Even as Oil Prices Rebound, 16 June 2016

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» Oil and Gas Industry – Global: Broad Slate of Downgrades Reflects Lasting Worldwide Price Weakness, 19 April 2016

» Independent Exploration and Production Industry - Global: E&P Ratings Reviews Emphasized Both Quantitative and Qualitative Factors, 12 April 2016

Sector Comments:

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» Independent Exploration and Production - North America: Defaults Among Oil and Gas Producers Will Test Collateral Value of Second-Lien Debt, 2 June 2016

» Energy - Global: Ratings Review Summary, 3 May 2016

Rating Methodology:

» Global Independent Exploration and Production Industry, December 2011

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REPORT NUMBER 1038976

MOODY'S
INVESTORS SERVICE

	Moody's Ratings				S&P Ratings					
	Sr Secured	Sr Unsecured	Comm Paper	Corp Credit Rating	Sr Secured	Sr Unsecured	Comm Paper	Corp Credit Rating	Business Profile	Financial Profile
Fortis, Inc.	-	Baa3	-	Baa3/Stable	-	A-	-	A-/Negative	Excellent	Significant
CH Energy Group, Inc.	-	-	-	-	-	-	-	-	-	-
Central Hudson Gas & Electric	-	A2	-	A2/Stable	-	A-	-	A/Negative	Excellent	Intermediate
Consolidated Edison Inc.	-	A3	P-2	A3/Stable	-	A-	A-2	A-/Negative	Excellent	Significant
CECONY	-	A2	P-1	A2/Stable	-	A-	A-2	A-/Negative	Excellent	Significant
O&R	-	A3	P-2	A3/Stable	-	A-	A-2	A-/Negative	Excellent	Significant
Iberdrola S.A.	-	Baa1	P-2	Baa1/Positive	-	BBB+	A-2	BBB+/Stable	Strong	Significant
Avangrid	-	Baa1	P-2	Baa1/Stable	-	BBB+	A-2	BBB+/Stable	Strong	Intermediate
NYSEG	A3	A3	-	A3/Stable	-	A-	A-2	BBB+/Positive	Excellent	Significant
RG&E	A2	-	-	Baa1/Positive	A	-	-	BBB+/Positive	Excellent	Significant
National Grid PLC	-	Baa1	P-2	Baa1/Stable	-	BBB+	A-2	A-/Stable	Excellent	Significant
National Grid USA	-	Baa1	P-2	Baa1/Stable	-	BBB+	A-2	A-/Stable	Excellent	Significant
NiMo	A1	A2	-	A2/Stable	-	A-	A-2	A-/Stable	Excellent	Significant
KeySpan Corporation	-	Baa1	-	Baa1/Stable	-	A-	-	A-/Stable	Excellent	Significant
KEDLI	-	A2	-	A2/Stable	-	A-	-	A-/Stable	Excellent	Significant
KEDNY	-	A2	-	A2/Stable	-	A-	-	A-/Stable	Excellent	Significant
NFG	-	Baa3	P-3	Baa3/Stable	-	BBB	A-2	BBB/Negative	Satisfactory	Significant

Regulatory Research Associates
REGULATORY FOCUS

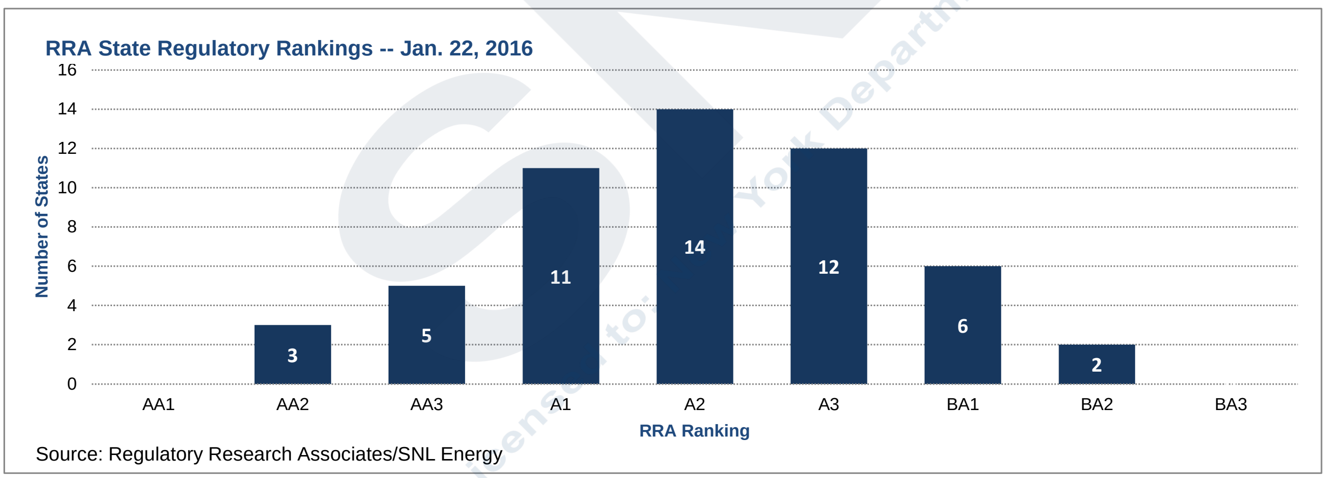
January 22, 2016

STATE REGULATORY EVALUATIONS
~ Including an Overview of RRA's ranking process ~

RRA evaluates the regulatory climates of the jurisdictions within the 50 states and the District of Columbia (a total of 53 jurisdictions) on an ongoing basis. The evaluations are assigned from an investor perspective and indicate the relative regulatory risk associated with the ownership of securities issued by each jurisdiction's electric and gas utilities. Each evaluation is based upon consideration of the numerous factors affecting the regulatory process in the state, and is changed as major events occur that cause RRA to modify its view of the regulatory risk accruing to the ownership of utility securities in that individual jurisdiction.

RRA also reviews evaluations when updating Commission Profiles, and when publishing this quarterly comparative report. The issues considered are discussed in Focus Notes, Commission Profiles, or Final Reports. RRA also considers information obtained from contacts with commission, company, and government personnel in the course of its research. The final evaluation is an assessment of the probable level and quality of the earnings to be realized by the state's utilities as a result of regulatory, legislative, and court actions.

RRA maintains three principal rating categories, Above Average, Average, and Below Average, with Above Average indicating a relatively more-constructive, lower-risk regulatory environment from an investor viewpoint, and Below Average indicating a less-constructive, higher-risk regulatory climate from an investor viewpoint. Within the three principal rating categories, the numbers 1, 2, and 3 indicate relative position. The designation 1 indicates a stronger (more constructive) rating; 2, a mid-range rating; and, 3, a weaker (less constructive) rating. We endeavor to maintain about an equal number of ratings above the average and below the average. The graph below depicts the current distribution of our rankings. (**For a discussion of RRA's ratings process, see the Appendix that starts on page 3**.)



RRA's previous "State Regulatory Evaluations" report was published on Oct. 28, 2015, at which time RRA made three ratings changes: to recognize the generally restrictive posture of the Washington Utilities and Transportation Commission (WUTC), RRA lowered the rating of that jurisdiction to Average/3 from Average/2; in light of generally restrictive ratemaking practices and the uncertainty surrounding the District of Columbia Public Service Commission's review of the proposed Exelon/Pepco Holdings merger, RRA lowered the ranking of that jurisdiction to Below Average/1 from Average/3; and, in light of the policy shift to allow the Pennsylvania Public Utility Commission to set base rates utilizing forecasted test years and approval of expedited infrastructure investment recovery mechanisms, RRA raised the ranking of that jurisdiction to Average/2 from Average/3. Since that time, RRA has made no rankings changes. However, RRA continues to monitor developments in Arkansas, noting that a change may be warranted in the near future. Legislation enacted in 2015 permits the Arkansas Public Service Commission (PSC) to approve the use of formula rate plans (FRPs) for the state's utilities; however, no such requests have been approved (two are pending). Approval of these FRPs would be a constructive step, and coupled with the recent approval of an acquisition-related settlement, suggest that an upward revision in the ranking may be justified.

Above Average	**Average**	**Below Average**
1	**1** California Colorado Hawaii Kentucky Louisiana—PSC Louisiana—NOCC Michigan North Carolina North Dakota South Carolina Tennessee	**1** District of Columbia Illinois Montana New Mexico Texas PUC West Virginia
2 Alabama Virginia Wisconsin	**2** Alaska Idaho Kansas Maine Minnesota Missouri Nebraska Nevada New York Ohio Oklahoma Pennsylvania Utah Wyoming	**2** Connecticut Maryland
3 Florida Georgia Indiana Iowa Mississippi	**3** Arizona Arkansas Delaware Massachusetts New Hampshire New Jersey Oregon Rhode Island South Dakota Texas RRC Vermont Washington	**3**

ALPHABETICAL LISTING

Alabama - AA/2
Alaska – A/2
Arizona - A/3
Arkansas –A/3
California – A/1
Colorado - A/1
Connecticut – BA/2
Delaware – A/3
Dist. of Col. – BA/1
Florida – AA/3
Georgia – AA/3
Hawaii - A/1
Idaho - A/2
Illinois - BA/1
Indiana - AA/3
Iowa - AA/3
Kansas – A/2
Kentucky - A/1
Louisiana PSC – A/1
Louisiana NOCC—A/1
Maine - A/2
Maryland – BA/2
Massachusetts – A/3
Michigan - A/1
Minnesota - A/2
Mississippi - AA/3
Missouri - A/2
Montana - BA/1
Nebraska – A/2
Nevada – A/2
New Hampshire – A/3
New Jersey - A/3
New Mexico - BA/1
New York – A/2
North Carolina - A/1
North Dakota - A/1
Ohio - A/2
Oklahoma - A/2
Oregon - A/3
Pennsylvania - A/2
Rhode Island - A/3
South Carolina - A/1
South Dakota - A/3
Tennessee - A/1
Texas PUC - BA/1
Texas RRC – A/3
Utah - A/2
Vermont - A/3
Virginia - AA/2
Washington - A/3
West Virginia – BA/1
Wisconsin - AA/2
Wyoming - A/2

Appendix: Explanation of RRA ratings process

As noted above, RRA maintains three principal rating categories, Above Average, Average, and Below Average, with Above Average indicating a relatively more constructive, lower-risk regulatory environment from an investor viewpoint, and Below Average indicating a less constructive, higher-risk regulatory climate. Within the three principal rating categories, the numbers 1, 2, and 3 indicate relative position. The designation 1 indicates a stronger (more constructive) rating; 2, a mid-range rating; and, 3, a weaker (less constructive) rating within each higher-level category. Hence, if you were to assign numeric values to each of the nine resulting categories, with a "1" being the most constructive from an investor viewpoint and a "9" being the least constructive from an investor viewpoint, then Above Average/1 would be a "1" and Below Average/3 would be a "9."

The rankings are subjective and are intended to be comparative in nature. Consequently, we do not use a mathematical model to determine each state's ranking. However, we endeavor to maintain a "normal distribution" with an approximately equal number of rankings above and below the average. The variables that RRA considers in determining each state's ranking are largely the broad issues addressed in our State Regulatory Reviews/Commission Profiles and those that arise in the context of rate cases and are discussed in RRA Rate Case Final Reports. Keep in mind that the rankings reflect not only the decisions rendered by the state regulatory commission, but also take into account the impact of the actions taken by the governor, the legislature, the courts, and the consumer advocacy groups. The summaries below are intended to provide an overview of these variables and how each can impact a given regulatory environment.

Commissioner Selection Process/Membership--RRA looks at how commissioners are selected in each state. All else being equal, RRA attributes a greater level of investor risk to states in which commissioners are elected rather than appointed. Generally, energy regulatory issues are less politicized when they are not subject to debate in the context of an election. Realistically, a commissioner candidate who indicates sympathy for utilities and appears to be amenable to rate increases is not likely to be popular with the voting public. Of course, in recent years there have been some notable instances in which energy issues in appointed-commission states have become gubernatorial/senatorial election issues, with detrimental consequences for the utilities (e.g., Illinois, Florida, and Maryland, all of which were downgraded by RRA when increased politicization of the regulatory process became apparent.)

In addition, RRA looks at the commissioners themselves and their backgrounds. Experience in economics and finance and/or energy issues is generally seen as a positive sign. Previous employment by the commission or a consumer advocacy group is sometimes viewed as a negative indicator. In some instances, new commissioners have very little experience or exposure to utility issues, and in some respects, these individuals represent the highest level of risk, simply because there is no way to foresee what they will do or how long it will take them to "get up to speed."

Commission Staff/Consumer Interest--Most commissions have a staff that participates in rate proceedings. In some instances the Staff has a responsibility to represent the consumer interest and in others the Staff's statutory role is less defined. In addition, there may or may not be: additional state-level organizations that are charged with representing the interests of a certain class or classes of customers; private consortia that represent certain customer groups; and/or, large-volume customers that intervene directly in rate cases. Generally speaking, the greater the number of consumer intervenors, the greater the level of uncertainty for investors. The level of risk for investors also depends on the caliber and influence (political and otherwise) of the intervening parties and the level of contentiousness in the rate case process. RRA's opinion on these issues is largely based on past experience and observations.

Rate Case Timing/Interim Procedures--For each state commission, RRA considers whether there is a set time frame within which a rate case must be decided, the length of any such statutory time frame, the degree to which the commission adheres to that time frame, and whether interim increases are permitted. Generally speaking, we view a set time frame as preferable, as it provides a degree of certainty as to when any new revenue may begin to be collected. In addition, shorter time frames for a decision generally reduce the likelihood that the actual conditions during the first year the new rates will be in effect will vary markedly from the test period utilized (a discussion of test periods is provided below) to set new rates. In addition, the ability to implement all or a portion of a proposed rate increase on an interim basis prior to a final decision in a rate case is viewed as constructive.

Return on Equity--Return on equity (ROE) is perhaps the single most litigated issue in any rate case. There are two aspects RRA considers when evaluating an individual rate case and the overall regulatory environment: (1) how the authorized ROE compares to the average of returns authorized for energy utilities nationwide over the 12 months, or so, immediately preceding the decision; and, (2) whether the company has been accorded a reasonable opportunity to earn the authorized return in the first year of the new rates. (It is important to note that even if a utility is accorded a "reasonable opportunity" to earn its authorized ROE, there is no guarantee that the utility will do so.)

With regard to the first criteria, RRA looks at the ROEs historically authorized for utilities in a given state and compares them to utility industry averages (the benchmark statistics are available in *RRA's Major Rate Case Decisions Quarterly Updates*). Intuitively, authorized ROEs that meet or exceed the prevailing averages at the time established are viewed as more constructive than those that fall short of these averages.

With regard to the second consideration, in the context of a rate case, a utility may be authorized a relatively high ROE, but factors, e.g., capital structure changes, the age or "staleness" of the test period, rate base and expense disallowances, the manner in which the commission chooses to calculate test year revenue, and other adjustments, may render it unlikely that the company will earn the authorized return on a financial basis. Hence, the overall decision may be negative from an investor viewpoint, even though the authorized ROE is equal to or above the average. (RRA's *Rate Case Final Reports* provide a detailed analysis of each fully-litigated commission decision.)

Rate Base and Test Period--As noted above, a commission's policies regarding rate base and test year can impact the ability of a utility to earn its authorized ROE. These policies are often outlined in state statutes and the commission usually does not have much latitude with respect to these overall policies. With regard to rate base, commissions employ either a year-end or average valuation (some also use a date-certain). In general, assuming rate bases are rising, i.e., new investment is outpacing depreciation, a year-end valuation is preferable from an investor viewpoint. Again this relates to how well the parameters used to set rates reflect actual conditions that will exist during the rate-effective period; hence, the more recent the valuation, the more likely it is to approximate the actual level of rate base being employed to serve customers once the new rates are placed into effect. Some commissions permit post-test-year adjustments to rate base for "known and measurable" items, and, in general, this practice is beneficial to the utilities.

Another key consideration is whether state law and/or the commission generally permits the inclusion in rate base of construction work in progress (CWIP), i.e., assets that are not yet, but ultimately will be, operational in serving customers. Generally, investors view inclusion of CWIP in rate base for a cash return as constructive, since it helps to maintain cash flow metrics during a large construction phase. Alternatively, the utilities accrue allowance for funds used during construction (AFUDC), which is essentially booking a return on the construction investment as a regulatory asset that is recoverable from ratepayers once the project in question becomes operational. While this method bolsters earnings, it does not augment cash flow.

With regard to test periods, there are a number of different practices employed, with the extremes being fully-forecasted (most constructive) on the one hand and fully historical (least constructive) on the other. Some states utilize a combination of the two, in which a utility is permitted to file a rate case that is based on data that is fully or partially forecast at the time of filing, and is later updated to reflect actual data that becomes known during the course of the proceeding.

Accounting--RRA looks at whether a state commission has permitted unique or innovative accounting practices designed to bolster earnings. Such treatment may be approved in response to extraordinary events such as storms, or for volatile expenses such as pension costs. Generally, such treatment involves deferral of expenditures that exceed the level of such costs reflected in base rates. In some instances the commission may approve an accounting adjustment to temporarily bolster certain financial metrics during the construction of new generation capacity. From time-to-time commissions have approved frameworks under which companies were permitted to, at their own discretion, adjust depreciation in order to mitigate under-earnings or eliminate an over-earnings situation without reducing rates. These types of practices are generally considered to be constructive from an investor viewpoint.

Alternative Regulation--Generally, RRA views as constructive the adoption of alternative regulation plans that: allow a company or companies to retain a portion of cost savings (e.g. fuel, purchased power, pension, etc.) versus benchmark levels; permit a company to retain for shareholders a portion of off-system sales revenues; or, provide a company an enhanced ROE for achieving operational performance and/or customer service metrics or for investing in certain types of projects (e.g., demand-side management programs, renewable resources, new traditional plant investment). The use of ROE-based earnings sharing plans is, for the most part, considered to be constructive, but it depends upon the level of the ROE benchmarks specified in the plan, and whether there is symmetrical sharing of earnings outside the specified range.

Court Actions--This aspect of state regulation is particularly difficult to evaluate. Common sense would dictate that a court action that overturns restrictive commission rulings is a positive. However, the tendency for commission rulings to come before the courts, and for extensive litigation as appeals go through several layers of court review, may add an untenable degree of uncertainty to the regulatory process. Also, similar to commissioners, RRA looks at whether judges are appointed or elected.

Legislation--While *RRA's Commission Profiles* provide statistics regarding the make-up of each state legislature, RRA has not found there to be any specific correlation between the quality of energy legislation enacted and which political party controls the legislature. Of course, in a situation where the governor and legislature are of the same political party, generally speaking, it is easier for the governor to implement key policy initiatives, which may or may not be focused on energy issues. Key considerations with respect to legislation include: how prescriptive newly enacted laws are; whether the bill is clear or ambiguous and open to varied interpretations; whether it balances ratepayer and shareholder interests rather than merely "protecting" the consumer; and, whether the legislation takes a long-term view or is it a "knee-jerk" reaction to a specific set of circumstances.

Corporate Governance--This term generally refers to a commission's ability to intervene in a utility's financial decision-making process through required pre-approval of all securities issuances, limitations on leverage in utility capital structures, dividend payout limitations, ring-fencing, and authority over mergers (discussed below). Corporate governance may also include oversight of affiliate transactions. In general, RRA views a modest level of corporate governance provisions to be the norm, and in some circumstances these provisions (such as ring-fencing) have protected utility investors as well as ratepayers. However, a degree of oversight that would allow the commission to "micromanage" the utility's operations and limit the company's financial flexibility would be viewed as restrictive.

Merger Activity--In cases where the state commission has authority over mergers, RRA reviews the conditions, if any, placed on the commission's approval of these transactions, specifically: whether the company will be permitted to retain a portion of any merger-related cost savings; if guaranteed rate reductions or credits were required; whether certain assets were required to be divested; and, whether the commission placed stringent limitations on capital structure and/or dividend policy.

Electric Regulatory Reform/Industry Restructuring--RRA generally does not view a state's decision to implement retail competition as either positive or negative from an investor viewpoint. However, for those states that have implemented retail competition, RRA considers: whether up-front guaranteed rate reductions were required; how stranded costs were quantified and whether the utilities were accorded a reasonable opportunity to recover stranded costs; the length of the transition period and whether utilities were at risk for power price fluctuations associated with their default service responsibilities during the transition period; how default service is procured following the end of the transition period; and, how any price volatility issues that arose as the transition period expired were addressed.

Gas Regulatory Reform/Industry Restructuring--Retail competition for gas supply is more widespread than is electric retail competition, and the transition was far less contentious, as the magnitude of potential stranded asset costs was much smaller. Similar to the electric retail competition, RRA generally does not view a state's decision to implement retail competition for gas service as either positive or negative from an investor viewpoint. RRA primarily considers the manner in which stranded costs were addressed and how default service obligation-related costs are recovered.

Securitization--Securitization refers to the issuance of bonds backed by a specific existing revenue stream that has been "guaranteed" by regulators. State commissions have used securitization to allow utilities to recover demand-side management costs, electric-restructuring-related stranded costs, environmental compliance costs, and storm costs. RRA views the use of this mechanism as generally constructive from an investor viewpoint, as it virtually eliminates the recovery risk for the utility.

Adjustment Clauses--For many years adjustment clauses have been widely utilized to allow utilities to recover fuel and purchased power costs outside a general rate case, as these costs are generally subject to a high degree of variability. In some instances a base amount is reflected in base rates, with the clause used to reflect variations from the base level, and in others, the entire annual fuel/purchased power cost amount is reflected in the clause. More recently, the types of costs recovered through these mechanisms has been expanded in some jurisdictions to include such items as pension and healthcare costs, demand-side management program costs, FERC-approved transmission costs, and new generation plant investment. Generally, RRA views the use of these types of mechanisms as constructive, but also looks at the frequency with which the adjustments occur, whether there is a true-up mechanism, and whether adjustments are forward-looking in nature. Other mechanisms that RRA views as constructive are weather normalization clauses that are designed to remove the impact of weather on a utility's revenue and decoupling mechanisms that may remove not only the impact of weather, but also the earnings impacts of customer participation in energy efficiency programs. Generally, an adjustment mechanism would be viewed as less constructive if there are provisions that limit the utility's ability to fully implement revenue requirement changes under certain circumstances, e.g., if the utility is earning in excess of its authorized return.

Integrated Resource Planning--RRA generally considers the existence of a resource planning process as constructive from an investor viewpoint, as it may provide the utility at least some measure of protection from hindsight prudence reviews of its resource acquisition decisions. In some cases, the process may also provide for pre-approval of the ratemaking parameters and/or a specific cost for the new facility. RRA views these types of provisions as constructive, as the utility can make more informed decisions as to whether it will proceed with a proposed project.

Renewable Energy/Emissions Requirements--As with retail competition, RRA does not take a stand as to whether the existence of renewable portfolio standards or an emissions reduction mandate is positive or negative from an investor viewpoint. However, RRA considers whether there is a defined pre-approval and/or cost-recovery mechanism for investments in projects designed to comply with these standards. RRA also reviews whether there is a mechanism (e.g., a percent rate increase cap) that ensures that meeting the standards does not impede the utility's ability to pursue other investments and/or recover increased costs related to other facets of its business. RRA also looks at whether incentives, such as an enhanced ROE, are available for these types of projects.

Rate Structure--RRA looks at whether there are economic development or load-retention rate structures in place, and if so, how any associated revenue shortfall is recovered. RRA also looks at whether there have been steps taken over recent years to reduce/eliminate inter-class rate subsidies, i.e., equalize rates of return across customer classes. In addition, RRA considers whether the commission has adopted or moved towards a straight-fixed-variable rate design, under which a greater portion (or all) of a company's fixed costs are recovered through the monthly customer charge, thus according the utility greater certainty of recovering its fixed costs.

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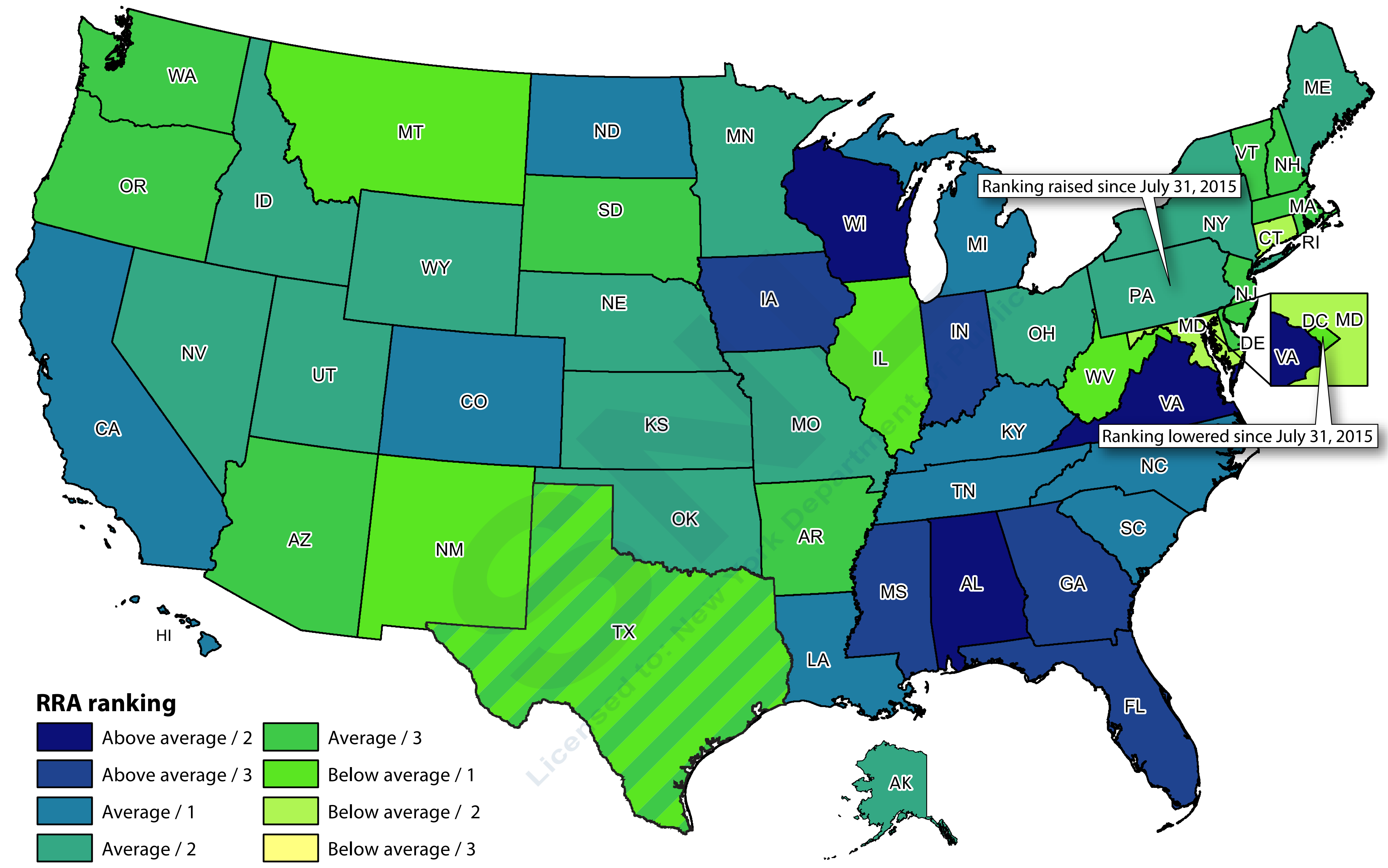
RRA state regulatory rankings



Source: SNL Energy/RRA
As of January 22, 2016
Texas PUC is Below Average/1 and the Texas RRC is Average/3

SNL Financial