Exhibit 33

Rebuttal Testimony and Schedules
Sarah W. Soong

Before the North Dakota Public Service Commission
State of North Dakota

In the Matter of the Application of Northern States Power Company
for Authority to Increase Rates for Electric Service in North Dakota

Case No. PU-20-441
Exhibit___(SWS-1)

# Capital Structure and Overall Rate of Return

June 1, 2021

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## Schedules

## I. WITNESS IDENTIFICATION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Sarah W. Soong. My business address is 401 Nicollet Mall, Minneapolis, Minnesota 55401.

Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?

A. I am employed by Xcel Energy Services Inc., the service company subsidiary of Xcel Energy Inc. ("Xcel Energy"), as Vice President and Treasurer.

Q. ON WHOSE BEHALF ARE YOU FILING REBUTTAL TESTIMONY IN THIS PROCEEDING?

A. I am filing rebuttal testimony on behalf of Northern States Power Company, a Minnesota corporation ("NSP" or "the Company").

Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AS VICE PRESIDENT AND TREASURER.

A. I am responsible for recommending and implementing the financing required to achieve target capital structure objectives at each of the regulated utility operating companies and at Xcel Energy. Since my tenure at Xcel Energy beginning in August 2018, Xcel Energy has originated more than $4 billion of green first mortgage bonds ("green bonds") and has set 10 capital market records establishing Xcel Energy as the #1 Environmental, Social and Governance bond issuer in the Investment Grade Utility Index, reducing customer costs for generations to come.

I am also responsible for corporate cash forecasting and management, pension plan management, hazard risk insurance, and treasury services and financial policies.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I have a Master of Business Administration from The Wharton School at the University of Pennsylvania, where I was a Citibank Scholar, a Master of Arts in Western European and French Studies from the Lauder Institute at the University of Pennsylvania, and a Bachelor of Arts degree from William and Mary. I have been employed by Xcel Energy in my current role since August 2018. Prior to coming to Xcel Energy, I served as Vice President and Treasurer of Oncor Electric Delivery Company LLC. From 2005 to 2017, I held a variety of project finance related roles at Hunt Consolidated, Inc., including Manager of Project Finance, Director of Project Finance, and lastly, Vice President of Project Finance. From 2004 until 2005, I served as the Manager of Corporate Finance at The Neiman Marcus Group, Inc. From 2003 until 2004, I was the Director of Acquisition Strategy at Exodus Energy LLC. From 1997 until 2002, I served as an Associate for Enron's Capital and Trade Management Development Program before accepting the position of Manager in Enron's Global Finance and Treasury department. From 1993 until 1995, I served as a Relationship Manager for Global Clients at ABN AMRO Bank, Netherlands, N.V. in the Czech Republic. In 1993, I served as a Financial Advisor and Consultant to N.M. Rothschild on behalf of ČESKOSLOVENSKÁ OBCHODNÍ BANKA (ČSOB) in the Czech Republic as well. Exhibit___(SWS-1), Schedule 1 provides additional details regarding my qualifications and expertise within corporate finance.

Q. EARLIER YOU MENTIONED GREEN BONDS. WHAT ARE GREEN BONDS?

A. Green bonds are a type of fixed-income instrument that is earmarked to raise money for climate and environmental related projects. In the Company's case, the green bonds issued to date (one in 2019, 2020 and 2021 each) have been tied to financing expenditures for wind projects.

Q. DO THE COMPANY'S NORTH DAKOTA CUSTOMERS BENEFIT FROM GREEN BONDS?

A. Yes. The main benefit of issuing green bonds as opposed to standard first mortgage bonds is to diversify the Company's investor base by attracting environmentally focused investors, which are becoming increasingly more common. A larger pool of investors leads to increased investor demand during a bond issuance. More demand can place added pressure on investors to accept a lower price, which can ultimately lead to a lower coupon and overall cost of long-term debt paid by North Dakota customers. Simply, by expanding our customer pool for our debt, green bonds can lower our financing costs, thereby lowering our cost of service.

Q. IS THERE EMPIRICAL DATA TO SUPPORT YOUR CLAIM THAT NORTH DAKOTA CUSTOMERS BENEFIT FROM ISSUING GREEN BONDS?

A. Yes. Of the 10 capital market records set since my time at Xcel Energy, two are held by NSP. In 2019, the Company issued $600 million in green bonds with a coupon of 2.90%, setting the record for the lowest coupon on 30-year bonds in utility industry history at the time of issuance. In 2020, the Company broke its own record with its issuance of $700 million in green bonds with a coupon of 2.60%. Again, the Company set a new record with the lowest coupon on 30-year bonds in utility industry history at the time of issuance.

Additionally, in the secondary trading markets (i.e., after the bond is originally placed), green bonds have been shown to trade at tighter levels than non-green first mortgage bonds. For example, as of May 2021, green first mortgage bonds issued by the Company were trading at tighter credit spreads (or the amount added to prevailing U.S. Treasury rates to determine the coupon) than standard first mortgage bonds.

Trading at tighter levels in the secondary market demonstrates the ever-increasing appetite that fixed-income investors have for green bonds in today's market – a trend that is expected to continue to grow.

Q. DID YOU FILE DIRECT TESTIMONY IN THIS PROCEEDING?

A. No.

Q. DID THE COMPANY FILE DIRECT TESTIMONY RELATING TO CAPITAL STRUCTURE IN THIS PROCEEDING?

A. Yes. Company Witness Mr. Dylan D'Ascendis included recommendations relating to capital structure, as well as the cost of long- and short-term debt, in Sections V and VI in his direct testimony.

Q. HOW DOES YOUR TESTIMONY RELATE TO THE DIRECT TESTIMONY OF COMPANY WITNESS MR. D'ASCENDIS?

A. My rebuttal testimony directly addresses issues raised by Advocacy Staff and intervenor witnesses on the subject of capital structure and related considerations. As the Treasurer of the Xcel Energy, I am directly responsible for maintaining the Company's capital structure and issuing debt on behalf of

the Company, and I am directly responding to those issues. Mr. D'Ascendis will continue to address issues related to Return on Equity ("ROE").

## II. PURPOSE OF REBUTTAL TESTIMONY AND RECOMMENDATIONS

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. I respond to the arguments and recommendations presented by Dr. Marlon Griffing on behalf of the North Dakota Public Service Commission Advocacy Staff.

Q. ARE YOU THE ONLY COMPANY WITNESS REBUTTING DR. GRIFFING'S TESTIMONY ON NSPM'S COST OF CAPITAL?

A. No. Mr. D'Ascendis is presenting rebuttal testimony regarding NSPM's required ROE.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. First, I explain how the Company's proposed equity ratio will continue to position the Company to maintain its current, strong credit metrics and financial integrity, while continuing to provide safe, reliable, and affordable electric service to North Dakota customers. Next, I discuss how Dr. Griffing's methodology for arriving at his capital structure recommendation is flawed. My rebuttal testimony will also demonstrate that the capital structure proposed by Dr. Griffing does not make business sense for the Company, or its customers, and calls into question the historical supportiveness of the North Dakota regulatory environment.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. I recommend that the North Dakota Public Service Commission ("Commission") approve the Company's proposed capital structure composed of 52.50% equity, 46.72% long-term debt, and 0.78% short-term debt. This aligns with the actual capital structure that the Company has consistently maintained in recent history and, as discussed below, should be used for ratemaking purposes.

I also recommend that the Commission approve the Company's proposed cost of long- and short-term debt, which is 4.22% and 1.00%, respectively. Dr. Griffing agrees with this recommendation and no other party has challenged the Company's proposed cost of debt.

Based on this, and Mr. D'Ascendis's proposed 10.20% ROE, I recommend that the Commission approve a weighted average cost of capital ("WACC") of 7.34%. My recommendation is illustrated in Table 1, below.

**Table 1**

| | Ratios | Rate | WACC |
|---|---|---|---|
| Long-Term Debt | 46.72% | 4.22% | 1.97% |
| Short-Term Debt | 0.78% | 1.00% | 0.01% |
| Common Equity | 52.50% | 10.20% | 5.36% |
| | 100.00% | | 7.34% |

## III. CAPITAL STRUCTURE

Q. WHY IS THE COMPANY'S EQUITY RATIO IMPORTANT?

A. The equity ratio is critically important because it is a powerful driver of cash flow metrics that are, in turn, of great importance in the credit evaluation of the

Company. Maintaining a reasonably strong equity layer is the most efficient way to sustain the Company's strong credit metrics and thus corporate credit rating. A company's financial health largely translates to its ability to secure access to capital under all capital market conditions and at a low cost to customers as financing costs are ultimately borne by customers.

Maintaining credit metrics by using the equity layer can be less costly to customers than maintaining the same metrics with ROE. This is due to the fact that using the ROE lever not only increases the net income associated with return but also the grossed-up income tax amount required with that return. Relying on a reasonably strong equity ratio partially mitigates the need to increase costs to customers because it displaces debt and its associated interest expense.

By lowering debt, which simultaneously increases cash flow, a reasonably strong equity ratio positively affects either the numerator or the denominator of nearly all key credit metrics used by credit rating agencies to evaluate a Company's risk profile in its quantitative analysis. Consequently, the equity ratio is a powerful and efficient way of improving the credit metrics at a relatively low cost to customers.

Q. WHAT CONSIDERATIONS DOES THE COMPANY TAKE INTO ACCOUNT IN DEVELOPING ITS RECOMMENDED CAPITAL STRUCTURE?

A. Our recommended capital structure is based on a tested, data-driven, and market-based approach and is comparable to our historical capital structure, which has provided long-term benefits to North Dakota customers in the form of safe, reliable, and affordable electric service over time.

NSP is a separate, stand-alone legal corporation that issues its own debt and manages its own separate capital structure consistent with the regulatory and financial risk at the operating company level and within its respective jurisdictions, including North Dakota. Moody's, Standard and Poor's ("S&P") and Fitch Ratings ("Fitch") all assign credit ratings to NSP as a corporate entity and to each one of NSP's individual bond issuances. The Company files its own quarterly and annual financial statements with the Securities and Exchange Commission ("SEC"), which credit rating agencies and investors use to analyze the Company. In addition, NSP issues its own debt to support capital expenditures and operations.

When developing our capital structure recommendation, we analyze prevailing market-conditions and risks, NSP's actual outstanding debt portfolio and future financing needs, along with what capital structure will support and maintain NSP's current strong credit metrics and corporate credit ratings. As Mr. D'Ascendis describes in his Direct Testimony, our proposed capital structure is based on our actual capital structure that has allowed us to achieve multiple records for low cost issuances within debt capital markets.

Q. WHAT HAS THE COMPANY'S ACTUAL CAPITAL STRUCTURE BEEN RECENTLY?

The Company's actual common equity ratios from 2015-2019 ranged from 52.20% to 53.26%, with an average common equity ratio of 52.59%, as shown in Table 2 below.

**Table 2**

| | 2019 | 2018 | 2017 | 2016 | 2015 | Average |
|---|---|---|---|---|---|---|
| Common Equity | 52.20% | 52.81% | 52.38% | 52.31% | 53.26% | 52.59% |

Q. WHY IS IT IMPORTANT THAT THE COMMISSION ADOPT A CAPITAL STRUCTURE THAT IS REFLECTIVE OF THE COMPANY'S ACTUAL FINANCING PRACTICES?

A. Imposing a hypothetical capital structure can weaken the financial conditions of a company's operations and impact the company's ability to respond to expenses and investment needs. This results from the fact that, as more debt is introduced into the capital structure, the company becomes financially riskier, and earned cash flow is reduced, which, in turn, increases debt returns demanded by fixed-income investors and equity returns demanded by equity investors. Thus, intending to implement a reduction in the overall cost of capital calculation by increasing the amount of debt in the capital structure and lowering the equity ratio can produce the opposite of the desired effect.

## IV. FLAWS WITH DR. GRIFFING'S RECOMMENDATION

Q. PLEASE SUMMARIZE THE CAPITAL STRUCTURE THAT DR. GRIFFING RECOMMENDS IN HIS TESTIMONY

A. Dr. Griffing's proposed capital structure comprised of 49.50% equity, 50.00% long-term debt, and 0.50% short-term debt is identified in Table 3, below.

**Table 3**

| | Equity | Long-Term Debt | Short-Term Debt |
|---|---|---|---|
| Company Recommendation | 52.50% | 46.72% | 0.78% |
| Dr. Griffing's Recommendation[1] | 49.50% | 50.00% | 0.50% |
| ND Authorized Capital Structure – Electric [1] | 52.56% | 44.96% | 2.48% |

Q. HOW DOES THIS COMPARE TO YOUR RECOMMENDATION?

A. Dr. Griffing's recommended equity ratio is 300 basis points, or 3.00%, less than the Company's proposed capital structure.

As shown in Table 3, above, Dr. Griffing's recommendation is also inconsistent with the Company's authorized capital structure for nearly the last decade. Further, Dr. Griffing's recommended capital structure differs significantly from the Company's actual capital structure from 2015-2019 (the last five fiscal years at the time of the original filing) as shown in Table 2 above.

Q. IS DR. GRIFFING'S RECOMMENDED CAPITAL STRUCTURE WITH A PROPOSED 49.50% EQUITY RATIO REASONABLE?

A. No. The size of Dr. Griffing's adjustment is so large as to be unreasonable. As shown in Table 2, over the past five years, the Company's equity ratio has remained within 30 basis points, or 0.30%, of the Company's recommended (and currently authorized) ratio for all but one year, when the ratio was 53.26%, or 80 basis points, 0.80%, above the authorized ratio. Dr. Griffing's proposed 49.50% equity ratio is a material deviation from both the Company's authorized and historical equity ratio, and ranges from an extraordinary 270 to 376 basis

points, or 2.76% to 3.76%, below the Company's actual equity ratio during 2015-2019. Stating this another way, the Company aims to manage its equity ratio within 30 basis points of the Commission authorized ratio. Dr. Griffing's recommendation is so concerning to the Company because it is 10x that amount (i.e., 30 basis points x 10 = 300 basis points or 3.00%).

Q. WHY IS SUCH A LARGE CHANGE FROM THE COMPANY'S ACTUAL CAPITAL STRUCTURE UNREASONABLE?

A. It is unreasonable because it represents a significant departure from the capital structure authorized and maintained by the Company for years. During this time period, North Dakota customers have benefited from the current, strong credit metrics through low costs of debt. Additionally, no reason was presented in Dr. Griffing's testimony explaining why such a change was prudent, calling into question the overall reasonableness of such a recommendation.

Q. DID DR. GRIFFING DISCUSS ANY POTENTIAL IMPACT TO THE COMPANY AND ITS CUSTOMERS AS A RESULT OF SUCH A DRAMATIC CHANGE?

A. No. Dr. Griffing's testimony does not consider the potential impact of such change on the Company, and by extension its customers, including impact to our credit metrics and credit rating agency perceptions, all of which ultimately impact our cost of debt. I discuss this further, later in my testimony.

Q. DO YOU AGREE WITH THE "METHODOLOGY" USED BY DR. GRIFFING TO REACH HIS RECOMMENDED CAPITAL STRUCTURE?

A. No. The methodology used by Dr. Griffing is flawed and should be deemed as too subjective to be reasonably relied upon. Dr. Griffing ostensibly utilizes a comparison group methodology to develop his capital structure

recommendation but his recommendation is not consistent with his comparison group results and is made without any regard to the Company's actual capital structure or any methodological rigor to help ensure that his recommendation is appropriate.

Q. IS A COMPARISON GROUP METHODOLOGY LIKE THE ONE EMPLOYED BY DR. GRIFFING EVER APPROPRIATE?

A. Only as a check on the reasonableness of the Company's recommendation. According to the Society of Utility and Regulatory Financial Analysts' Cost of Capital Guide, a hypothetical capital structure like the one that is proposed by Dr. Griffing is appropriate when the actual capital structure of the utility is deemed to be substantially different from the typical utility capital structure. Using a comparison group, like the one Dr. Griffing recommends, can therefore be a test as to if the Company's recommended capital structure is typical. The Company's recommended equity structure is within the range of 40.59% to 52.87% of the comparison group selected by Dr. Griffing. Consequently, the Company's recommendation to utilize its actual capital structure to which it manages meets any test of reasonableness.

Q. WHAT ARE YOUR CONCERNS WITH DR. GRIFFING'S METHODOLOGY?

A. Rather than using the Comparison Group as a reasonableness check on a Company's recommended capital structure, Dr. Griffing's methodology is loosely based on calculating average ratios for long-term debt, short-term debt, preferred equity and common equity using his Comparison Group comprised of 16 utility holding companies. His method of selecting the comparison group has little rigor and his methodology for selecting the components of the capital structure are flawed.

Q. PLEASE EXPLAIN YOUR CONCERNS WITH DR. GRIFFING'S SELECTION OF HIS COMPARISON GROUP.

A. As summarized in his direct testimony, when calculating the average ratios, he excluded CMS Energy Corporation, Entergy Corporation, The Southern Company, American Electric Power Company, Inc., and Dominion Energy, Inc. from his analysis. He gives no material rational for why he did so, other than that components of these utilities' capital structures were too "lopsided."

Q. HOW DID DR. GRIFFING UTILIZE HIS ADJUSTED COMPARISON GROUP?

A. Based on his adjusted comparison group analysis, Dr. Griffing calculated the following adjusted averages of the group: 48.02% for long-term debt, 6.10% for short-term debt, 0.13% for preferred equity, and 45.75% common equity. [1]

Q. HOW DID DR. GRIFFING UTILIZE THOSE CALCULATED AVERAGES TO ARRIVE AT HIS RECOMMENDATION?

A. It is unclear. Dr. Griffing apparently used these calculated averages as guideposts for his subjective recommendation.

Q. PLEASE EXPLAIN.

A. Dr. Griffing seems to selectively pick what average to latch onto as the starting point for his recommended capital structure and seemingly ignores the remainder of his results, which should call into question the overall reasonableness of his approach.

[1] Response to DR NSP-5-2 (provided as Schedule 2)

First, Dr. Griffing "adopted 0.50 percent for short-term debt as it is close to NSPM's requested ratio" despite his stated short-term debt ratio being significantly and unreasonably too high to recommend (i.e., 0.50% as compared to his corrected calculated average of 6.10%). Additionally, his recommended long-term debt ratio of 50.00% was reached because "[it] is close to both the Company's request and the average for the proxy group companies." From there, Dr. Griffing backed into his equity ratio of 49.50% because that's what was "left."

Along with the relatively arbitrary nature of this approach, Dr. Griffing failed to update his capital structure recommendations in response to his corrected adjusted average ratios provided in response to Data Request NSP Set 5. As included in Dr. Griffing's response to the data request, his corrected adjusted long-term debt average is 48.02% as compared to the 49.67% originally included in his direct testimony, representing a difference of 198 basis points, or 1.98%, versus the original 33, or 0.33%, from his recommended long-term debt ratio of 50.00%. Again, the divergence in Dr. Griffing's calculated averages and his ultimate recommendations are extreme.

Q. DO YOU HAVE OTHER CONCERNS WITH DR. GRIFFING'S APPROACH?

A. Yes. Dr. Griffing's reliance on an intuitive capital structure consensus rather than using more sophisticated data analytics to calculate an appropriate outcome does North Dakota customers a disservice. His analysis fails to examine the Company's requested capital structure through a reasonable lens because it does not reference, or even consider, a range.

If Dr. Griffing's data were presented differently, the range of common equity ratios for his adjusted Comparison Group (i.e., removing the aforementioned companies[2]) is 40.59% to 52.87%. Our requested equity ratio of 52.50% is within that range. Additionally, it is important to note that Dr. Griffing's Comparison Group is composed of utility holding companies instead of utility operating companies, and he fails to present any operating company comparison points for consideration. However, as included in Mr. D'Ascendis's direct testimony, the common equity ratios for his Proxy Group (similarly composed of utility holding companies) ranges from 35.73% to 58.04%.[3] Mr. D'Ascendis then takes his analysis a step further and offers an additional comparison point to check for reasonableness and presents the common equity ratios of the operating utility subsidiaries of his Proxy Group, ranging from 45.23% to 65.22%.[4]

No matter what range is analyzed, the Company's requested equity ratio of 52.50% is within the range, even towards the bottom quartile of the only range specific to utility operating companies.

## V. RISKS OF ADOPTING DR. GRIFFING'S RECOMMENDATION

Q. BASED ON YOUR YEARS OF EXPERIENCE IN MANAGING CAPITAL STRUCTURES IN PRACTICE, WHAT RISK DO YOU BELIEVE WILL BE THE IMPACT OF ADOPTING DR. GRIFFING'S RECOMMENDED CAPITAL STRUCTURE?

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[2] CMS Energy Corporation, Entergy Corporation, The Southern Company, American Electric Power Company, Inc., and Dominion Energy, Inc.
[3] D'Ascendis Dir. at 23.
[4] D'Ascendis Dir. at 24.

A. It will affect the perception of how risky investing in the Company is since it signals that the Company will have higher regulatory risk.

Q. HOW SO?

A. NSP has $6.85 billion of publicly traded debt outstanding and, as is required, is assigned credit ratings from credit rating agencies, including Moody's, S&P and Fitch. These credit rating agencies assign credit ratings based on in-depth analysis and review. The analysis centers on two main areas: qualitative analysis and quantitative analysis. The qualitative side is the assessment of business risk, which is comprised of the broad macroeconomic risks prevailing at the country, industry, and state level. For a utility, regulatory risk is the most significant overall business risk, which I describe below. The issuer's more specific risk within its business and economic environment is then determined. The quantitative side of the analysis examines financial ratios to analyze the financial risk of the issuer.

Business risk and financial risk can be viewed as complementary sides of the total risk of an entity, so that more of one risk must be offset by less of the other risk to arrive at a specific rating. Because utilities are tightly regulated on financial matters that limit how much financial metrics tend to vary over time, qualitative analysis – specifically, regulatory risk – is a key consideration in rating outcomes and derives significant attention from credit rating agencies.[5]

[5] Schedule 3 at 4-5 and Schedule 4 at 4.

Q. HOW MUCH WEIGHT IS PLACED ON REGULATORY RISK BY CREDIT RATING AGENCIES?

A. For Moody's, regulatory risk constitutes up to 60% of the credit profile and for S&P, it is up to 80%.[6] Both focus on the basic regulatory framework, including (1) the legal foundation for utility regulation, (2) the ratemaking policies and procedures that determine how well the utility is afforded the opportunity to earn a reasonable return with a reasonable cash component, and (3) the history of regulatory behavior by the governing bodies by applying those laws, policies, and procedures. Then they examine the mechanics of regulation, particularly the rate-setting process.

Q. WHAT OTHER CONSIDERATIONS GO INTO DETERMINING REGULATORY RISK?

A. Credit rating agencies also place high value on transparency, predictability, and consistency in regulatory outcomes.[7] Credit rating agencies rate many types and tenors of fixed-income securities, but they regard debtholders who extend credit over long periods as their primary audience and strive to rate long-term debt as accurately as possible over the longest timeframe possible. Utilities fund capital expenditures primarily with long-dated maturities to match the long-lived assets they are supporting and utility investors value ratings that are stable. Regulatory frameworks and practices that allow rating agencies to confidently project future cash flows and debt leverage will naturally be accorded a better business risk profile. This predictability offers creditors the ability to accurately assess risk over most of the debt's term and improves the ability of the company to manage

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[6] Schedule 5 at 4 (Regulatory Framework (25%) + Ability to Cover Costs and Earn Returns (25%) + Diversification (10%)) and Schedule 6 at 6 and 9 (Competitive Advantage (60%) + Scale, Scope and Diversity (20%)).

[7] Schedule 5 at 10 and Schedule 6 at 6-8.

its business activities and capital program for the long-term benefit of ratepayers.

Q. HAVE CREDIT RATING AGENCIES COMMENTED ON THE IMPORTANCE OF REGULATORY FRAMEWORK IN EVALUATING A UTILITY'S FINANCIAL INTEGRITY OR HEALTH?

A. Yes. S&P has noted that the regulatory framework "is of critical importance when assessing regulated utilities' credit risk because it defines the environment in which a utility operates and has a significant bearing on a utility's financial performance."[8] Further, S&P observes that "we base our assessment of the regulatory framework's relative credit supportiveness on our view of how regulatory stability, efficiency of tariff setting procedures, financial stability, and regulatory independence protect a utility's credit quality and its ability to recover its costs and earn a timely return."[9]

Q. SHOULD THE COMMISSION CONSIDER REGULATORY RISK WHEN DECIDING THE OUTCOME OF THIS PROCEEDING?

A. Yes. As noted earlier, credit rating agencies have emphasized the importance of balanced, consistent, and constructive outcomes in utility rate proceedings. If the Commission were to approve Dr. Griffing's recommended capital structure, including 49.50% as the equity ratio, it would likely signal a significant shift in the perceived supportiveness or "business-friendly" environment in North Dakota, something that Moody's has already indicated is under consideration or review. Specifically, Moody's Credit Opinion for NSPM dated December 31, 2020 provided that: "[t]he outcome of NSP-Minnesota's ongoing

[8] Schedule 6 at 6.
[9] Schedule 6 at 6.

rate case will be an important indication of both the utility's relationship with the NDPUC [sic] and the credit supportiveness of the ND regulatory environment."[10]

Q. EVEN WHEN CONSIDERING THE SIZE OF NORTH DAKOTA OPERATIONS RELATIVE TO NSP AS A WHOLE, IS REGULATORY RISK STILL A LEGITIMATE CONCERN?

A. Yes. As noted above, this rate case proceeding has already caught the attention of Moody's and depending on the outcome of the rate case, will likely garner additional scrutiny. If Dr. Griffing's proposed equity ratio were approved by the Commission, it would signal a material divergence between what is authorized by the Commission and what the Company's actual capital structure is in practice.

If the Commission were to authorize a capital structure with an equity ratio significantly different than historical actuals, it could introduce the perception that the Commission is intentionally misaligning the Company's capital structure in hopes of potentially reducing costs to customers.

Q. HOW WOULD THE COMPANY MANAGE ITS ACTUAL CAPITAL STRUCTURE IF THE COMMISSION WERE TO APPROVE A CAPITAL STRUCTURE THAT DIVERGES FROM THE COMPANY'S ACTUAL CAPITAL STRUCTURE?

A. In reality, North Dakota represents a small piece of NSP as a whole. As such, even if the Commission were to approve Dr. Griffing's recommended capital structure, it is unlikely that the Company would immediately adjust its actual

[10] Schedule 3 at 5.

capital structure to match Dr. Griffing's recommendation because doing so would represent a significant departure from the capital structures authorized by NSP's other jurisdictions. Immediately adjusting the Company's actual capital structure in that way would materially impact our credit metrics, likely increasing costs for customers in all the states served by NSP; an outcome that the Company does not view as reasonable nor prudent. Consequently, should the Commission adopt Dr. Griffing's proposed capital structure, it would likely result in North Dakota customers continuing to benefit from the Company's strong credit without paying their fair share.

North Dakota has been a business-friendly, fair and reasonable jurisdiction for many years, and the Company has truly appreciated the balanced, constructive outcomes that have been reached over the years. Dr. Griffing's recommendation poses a threat to this and as such, even with the size of North Dakota's operations, it would call into question the fairness and regulatory supportiveness of the state.

## VI. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. In summary, I urge the Commission to adopt the capital structure recommended by the Company in this rebuttal testimony and as included below for reference. The capital structure recommended by the Company is reasonable, based on an actual and market-based approach, and will continue to ensure that the Company is positioned to provide safe, reliable and affordable service to North Dakota customers.

**Table 4**

| | Ratios | Rate | WACC |
|---|---|---|---|
| Long-Term Debt | 46.72% | 4.22% | 1.97% |
| Short-Term Debt | 0.78% | 1.00% | 0.01% |
| Common Equity | 52.50% | 10.20% | 5.36% |
| | 100.00% | | 7.34% |

Dr. Griffing's recommended capital structure should be disregarded by the Commission as his methodology is too subjective to be considered reasonable and fails to consider the potential impact to customers and the Company if adopted. Additionally, Dr. Griffing fails to provide any clear explanation justifying the 300 basis point change in the Company's equity ratio. Again, proposing such a dramatic change with no cause or reason does not make business sense.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes, it does.

STATE OF NORTH DAKOTA
BEFORE THE
PUBLIC SERVICE COMMISSION

| | | |
|---|---|---|
| In the Matter of the Application of Northern States Power Company, a Minnesota Corporation For Authority to Increase Rates for Electric Service in North Dakota | ) ) ) ) | Case No. PU-20-441 |

**AFFIDAVIT OF**
**Sarah W. Soong**

I, the undersigned, being duly sworn, depose and say that the foregoing is the Rebuttal Testimony of the undersigned, and that such Rebuttal Testimony and the exhibits or schedules sponsored by me to the best of my knowledge, information and belief, are true, correct, accurate and complete, and I hereby adopt said testimony as if given by me in formal hearing, under oath.

Sarah W. Soong

Subscribed and sworn to before me, this 25 day of May, 2021.

Notary Public
My Commission Expires:

JODY FOSTER
NOTARY PUBLIC - MINNESOTA
My Commission Expires
January 31, 2024

# SARAH W. SOONG

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**Wharton MBA | CIRA | French, Czech, Spanish & Italian**

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**CORPORATE TREASURER**
**Strategic Enterprise Financial Leadership**

*Capital Structuring – Investment Management – Financial Operations – Bank Relationships – M&A*

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**XCEL ENERGY Inc., Minneapolis, MN (NYSE: XEL)** **2018 – Present**
*$11 billion revenue utility and the first utility to announce 100% carbon-free goal by 2050*

**Vice President & Treasurer**
Oversees Treasury and ensures alignment with key corporate strategic priorities. Instrumental in providing governance and safeguarding the financial integrity of the company. Lead capital financings for parent company and its 4 operating subsidiaries. Recommend dividend and financing strategies to the Board. Department includes pension & trust investments, cash & liquidity, insurance & risk management, financial policy & rating agencies.

- Transforming Treasury culture from a siloed organization to a collaborative team environment
- Senior member of financial leadership team revamping Xcel corporate KPIs to reflect CFO-specific goals, personally sponsored 1) data reporting automation, 2) supplier diversity, 3) safety awareness, 4) inclusion and diversity, and 5) rate case execution
- Optimized team performance by strengthening engagement during pandemic continuing record-breaking accomplishments in capital markets
- Execute $5 billion annual capex program supported by $3-4 billion of annual securities issuances setting 10 historic low bond coupon records which reduced customer costs and maximized shareholder value
- Pioneered annual fee allocation program to diversity underwriting firms based on transparent metrics
- Issued over $4 billion of Green Bonds, establishing Xcel as the #1 issuer of ESG bonds in the Utility index
- Serve on pension, nuclear decommissioning and grantor trust committees for $6.5 billion assets
- Serve on Xcel Energy advisory committee for nationally recognized best in class insurance captive
- Executive sponsor of audit project to evaluate governance structure for $4 billion pension trust administration committee
- Executive sponsor of cross-organizational initiative with Supply Chain that consolidated $640 million card program and is expected to increase card rebate by 60%, improve O&M savings by $8 million and reduce corporate spend by 10% over 5 years

**ONCOR ELECTRIC DELIVERY COMPANY LLC, Dallas, TX** **2017 – 2018**
*Largest Texas electric T&D utility serving more than 10 million Texans daily*

**Vice President & Treasurer**
Oversaw Treasury activities including trust investments (401k and pension), insurance risk management, investor relations and rating agencies, credit compliance and large customer credit risk. Managed quarterly earnings calls.

- Achieved 1 to 2 notch upgrades on credit ratings from all 3 rating agencies
- Designed $2 billion commercial paper program to reduce funding costs by $6 million per year

**HUNT CONSOLIDATED, INC., Dallas, TX** **2005 – 2017**
*Ray Hunt family holding company for oil & gas, electric power, real estate and private equity interests*

**Vice President, Project Finance** (2012 – 2017)
**Director, Project Finance** (2010 – 2012) | **Manager, Project Finance** (2005 – 2010)
Advised holding company senior leadership and operating subsidiaries on balance sheet debt management, origination of debt capital for projects or acquisitions, and credit compliance with representations, warranties, and covenants for complex financial instruments.

Communicated business strategy and financial results to hedge fund investors and institutions, negotiated complex contractual agreements, and directed capital transactions. Led external Finance Committee for large Texas power company acquisition.

*Key transactions*

- Raised $6 billion capital markets bridge financing for acquisition of TX ring-fenced transmission asset
- Managed capital restructuring for 82,000 barrel per day complex crude refining subsidiaries
- Successfully renegotiated $750 million in refining hedging agreements and $450 million in credit facilities
- Raised $612 million of tax-exempt facility bonds for largest GO Zone bond issuer in Alabama
- Renegotiated $2.4 billion of multinational loan facilities reducing corporate cash outlay by $400 million
- Served as Corporate lead on $2.8 billion financing for $4.8 billion Yemen LNG project that was awarded "Deals of the Year" by *Project Finance Magazine* and *Infrastructure Journal*

**THE NEIMAN MARCUS GROUP, INC., Dallas, TX** **2004 – 2005**
*Mid-cap luxury retailer*
**Manager, Corporate Finance**

**EXODUS ENERGY LLC, Houston, TX** **2003 – 2004**
*Industry-focused private equity firm that ceased operating in 2008*
**Director, Acquisition Strategy**

**ENRON CORPORATION, Houston, TX** **1997 – 2002**
*Large-cap integrated energy company that filed for Chapter 11 in 2001*

**Manager, Global Finance & Treasury** (1997 – 2002)
**Associate, Enron Capital & Trade, Management Development Program** (1997)
Managed cross-border deal teams to execute equity and debt transactions to outside investors and partnered with operating subsidiaries to develop innovative project financing structures, lead non-recourse debt negotiations and created financial models.

- Negotiated $2.1 billion divestiture of power generation assets through leveraged buyout structure
- Led Tokyo team that obtained $435 million JBIC export credit loans for $1.8 billion Indian project financing
- Directed $35 million acquisition financing in Panama and $20 million revolver in Puerto Rico
- Originated $150 million of financing facilities for largest NYMEX trader in the world at the time
- Initiated corporate margin study to predict and manage costs of trading NYMEX futures which prepared senior management to maintain cash positive position during energy industry liquidity crisis in 2000
- Sold equity in U.K.-based joint venture with cash proceeds above company expectations by $9 million

**ABN AMRO BANK, Netherlands, N.V., Prague, Czech Republic** **1993 – 1995**
*Leading Dutch financial institution with global banking services platform*
**Relationship Manager, Global Clients**

**N. M. ROTHSCHILD/ ČESKOSLOVENSKÁ OBCHODNÍ BANKA (ČSOB), A.S., Prague, Czech Republic** **1993**
*British multinational investment bank/Czech trade finance bank*
**Financial Advisor & Consultant to N.M. Rothschild on behalf of ČSOB**

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**EDUCATION & CERTIFICATIONS**
**MBA, Finance, The Wharton School, University of Pennsylvania, Citibank Scholar, 1997**
**MA, Western European & French Studies, Lauder Institute, University of Pennsylvania, 1997**
**BA, Government, College of William and Mary, 1992**

Deloitte Next Generation CFO Academy, 2019
Certification of Insolvency and Restructuring Advisory (CIRA) in 2014, Distinguished Performance on Exam
Director's Certificate in 2019, Drexel LeBow College of Business, Gupta Center for Corporate Governance
Chamber of Commerce Leadership Dallas, Class of 2016 Graduate

**PROFESSIONAL AFFILIATIONS & COMMUNITY ACTIVITIES**
C200 Member, invitation-only organization dedicated to advancing women in business (2020 – Present)
Greater Twin Cities United Way, Board Member (2018 – Present)
Association of Insolvency and Restructuring Advisors, Member (2013 – Present)
Turnaround Management Association, Member (2013 – Present)
Dallas Committee on Foreign Relations, Board Member (2011 – 2017)

**LANGUAGES: Proficient in French (ACTFL Rating – Superior), Advanced Czech, Conversational Spanish & Italian**

**Data Request**
**NSP Set 5**
**Case No. PU-20-441**

**To:** North Dakota Public Service Commission Advocacy Staff

**From:** Northern States Power Company

**Date:** May 5, 2021

NSP 5-1. Please provide all schedules and workpapers in Mr. Griffing's Direct Testimony as live Excel files with all formulas and links intact.

RESPONSE: Please see the response to DR Set 3 NSP 3-1 and the workpaper files IBES S&P 500 EPS 040321 and S&P 500 Merged provide herewith.

NSP 5-2. Please reconcile the discrepancy between the capital structure ratios presented on page 44 of Mr. Griffing's Direct Testimony to the ratios in Schedule 2, page 5.

RESPONSE: Dr. Griffing believes that the data request intends to refer to the discrepancy between the capital structure ratios presented on page 44 of Dr. Griffing's Direct Testimony and the ratios presented in *Attachment MFG-20, Schedule 2, page* 5. Dr. Griffing did not include a document with the title *Schedule 2, page 5* in his Direct Testimony.

However, the version of Attachment MFG-20, Schedule 2, page 5 included in Dr. Griffing's Direct Testimony was incorrect. Please replace it with the attached Pdf file Attachment MFG-20, Schedule 2, Pages 1-5 CORRECTED.

Further, see the attached Pdf file PU-20-441 Griffing Direct Testimony Pages 44-45 CORRECTED. The values on these pages should match the values in the Pdf file Attachment MFG-20, Schedule 2, Pages 1-5 CORRECTED and the Attachment MFG-20, Schedule 2, page 5 in the Excel workbook PU-20-441 Griffing NSP Excel Attachments CORRECTED included as the response to NSP 3-1.

Dr. Griffing apologizes for the confusion caused by the inclusion of an incorrect Attachment MFG-20, Schedule 2, page 5 in his Direct Testimony.

NSP 5-3. Please provide the calculations used to derive Mr. Griffing's proposed capital structure.

RESPONSE: See Griffing Direct Testimony, page 45, lines 1-12. The Q&A is an oral description of Dr. Griffing's calculation of the proposed capital structure. The following is a numerical version.

| | |
|---|---|
| Beginning percentage | 100.00 |
| Less: Short-Term Debt | 0.50 |
| Remainder | 99.50 |
| Less: Long-Term Debt | 50.00 |
| Remainder = Common Equity | 49.50 |

Prepared by: Marlon F. Griffing, PH.D.

Date: May 5, 2021

| | |
|---|---|
| A | 10.80% |
| AAL | -45.70% |
| AAP | 13.96% |
| AAPL | 14.69% |
| ABBV | 4.10% |
| ABC | 9.20% |
| ABMD | 17.10% |
| ABT | 15.58% |
| ACN | 9.75% |
| ADBE | 17.80% |
| ADI | 11.78% |
| ADM | 4.30% |
| ADP | 10.26% |
| ADSK | 31.04% |
| AEE | 7.50% |
| AEP | 6.15% |
| AES | 8.15% |
| AFL | 6.11% |
| AIG | 16.74% |
| AIZ | 19.40% |
| AJG | 9.58% |
| AKAM | 10.44% |
| ALB | 15.00% |
| ALGN | 24.14% |
| ALK | -18.50% |
| ALL | 2.59% |
| ALLE | 1.70% |
| ALXN | 8.78% |
| AMAT | 21.28% |
| AMCR | 7.64% |
| AMD | 26.31% |
| AME | -1.20% |
| AMGN | 7.01% |
| AMP | 10.11% |
| AMT | 17.31% |
| AMZN | 37.20% |
| ANET | 6.60% |
| ANSS | 8.00% |
| ANTM | 13.42% |
| AON | 10.63% |
| AOS | 8.00% |
| APA | -24.00% |
| APD | 9.01% |
| APH | 11.20% |
| APTV | 43.37% |
| ARE | 0.10% |
| ATO | 7.00% |
| ATVI | 17.83% |
| AVB | 2.54% |
| AVGO | 8.60% |
| AVY | 7.84% |

| | |
|---|---|
| AWK | 8.60% |
| AXP | 15.60% |
| AZO | 6.70% |
| BA | 12.33% |
| BAC | 1.11% |
| BAX | 9.00% |
| BBY | 9.63% |
| BDX | 12.00% |
| BEN | 4.88% |
| BF-B | 7.53% |
| BIIB | -10.08% |
| BIO | 17.80% |
| BK | 12.85% |
| BKNG | 135.59% |
| BKR | 3.25% |
| BLK | 12.68% |
| BLL | 13.60% |
| BMY | 9.70% |
| BR | 10.00% |
| BRK-B | 23.30% |
| BSX | 6.55% |
| BWA | 19.41% |
| BXP | 7.00% |
| C | 1.28% |
| CAG | 6.60% |
| CAH | 7.57% |
| CARR | 5.53% |
| CAT | -1.11% |
| CB | 17.18% |
| CBOE | 1.80% |
| CBRE | 11.00% |
| CCI | 19.60% |
| CCL | -72.42% |
| CDNS | 11.10% |
| CDW | 11.59% |
| CE | 21.06% |
| CERN | 11.51% |
| CF | -5.21% |
| CFG | -2.76% |
| CHD | 8.71% |
| CHRW | 9.94% |
| CHTR | 33.74% |
| CI | 10.35% |
| CINF | 7.02% |
| CL | 7.46% |
| CLX | 5.07% |
| CMA | -10.70% |
| CMCSA | 14.57% |
| CME | 4.60% |
| CMG | 52.56% |
| CMI | 14.98% |

| | |
|---|---|
| CMS | 7.19% |
| CNC | 10.53% |
| CNP | -5.88% |
| COF | 4.19% |
| COG | 43.75% |
| COO | 10.00% |
| COP | -8.50% |
| COST | 8.64% |
| CPB | 8.64% |
| CPRT | 22.30% |
| CRM | 12.92% |
| CSCO | 6.60% |
| CSX | 15.38% |
| CTAS | 12.85% |
| CTLT | 15.97% |
| CTSH | 3.40% |
| CTVA | 18.25% |
| CTXS | 10.70% |
| CVS | 3.77% |
| CVX | -4.90% |
| CZR | 27.50% |
| D | 2.78% |
| DAL | -26.15% |
| DD | 29.80% |
| DE | 34.00% |
| DFS | 6.27% |
| DG | 13.57% |
| DGX | 9.22% |
| DHI | 17.90% |
| DHR | 12.19% |
| DIS | 48.53% |
| DISCA | 6.75% |
| DISCK | 12.90% |
| DISH | -23.01% |
| DLR | 30.98% |
| DLTR | 9.78% |
| DOV | 9.50% |
| DOW | -5.43% |
| DPZ | 10.43% |
| DRE | 6.00% |
| DRI | 36.64% |
| DTE | 6.05% |
| DUK | 4.99% |
| DVA | 13.83% |
| DVN | 25.00% |
| DXC | -8.82% |
| DXCM | 23.60% |
| EA | 14.52% |
| EBAY | 18.79% |
| ECL | 17.07% |
| ED | 2.95% |

| | |
|---|---|
| EFX | 10.63% |
| EIX | -0.50% |
| EL | 21.10% |
| EMN | 3.83% |
| EMR | 9.63% |
| ENPH | 37.70% |
| EOG | 58.35% |
| EQIX | 28.95% |
| EQR | 6.10% |
| ES | 7.05% |
| ESS | 7.90% |
| ETN | 15.69% |
| ETR | 5.50% |
| ETSY | 36.60% |
| EVRG | 5.65% |
| EW | 12.99% |
| EXC | -0.34% |
| EXPD | 4.20% |
| EXPE | -15.06% |
| EXR | 6.00% |
| F | 27.66% |
| FANG | 49.63% |
| FAST | 8.04% |
| FB | 21.50% |
| FBHS | 9.25% |
| FCX | 40.07% |
| FDX | 29.41% |
| FE | -1.97% |
| FFIV | 6.04% |
| FIS | 13.97% |
| FISV | 18.81% |
| FITB | -2.98% |
| FLIR | 6.40% |
| FLT | 12.04% |
| FMC | 9.00% |
| FOX | 9.20% |
| FOXA | 3.55% |
| FRC | 10.99% |
| FRT | 6.70% |
| FTNT | 16.38% |
| FTV | 7.05% |
| GD | 4.83% |
| GE | 322.50% |
| GILD | 3.26% |
| GIS | 4.16% |
| GL | 7.37% |
| GLW | 4.00% |
| GM | 11.84% |
| GNRC | 8.00% |
| GOOG | 16.95% |
| GOOGL | 16.95% |

| | |
|---|---|
| GPC | 4.60% |
| GPN | 9.73% |
| GPS | 4.90% |
| GRMN | 6.37% |
| GS | 16.53% |
| GWW | 12.65% |
| HAL | 15.50% |
| HAS | 17.50% |
| HBAN | -2.15% |
| HBI | 4.66% |
| HCA | 12.25% |
| HD | 8.37% |
| HES | -23.40% |
| HFC | -10.70% |
| HIG | 4.42% |
| HII | 0.38% |
| HLT | -6.25% |
| HOLX | 10.47% |
| HON | 8.81% |
| HPE | 12.51% |
| HPQ | 15.07% |
| HRL | 3.70% |
| HSIC | 14.43% |
| HST | 28.40% |
| HSY | 7.60% |
| HUM | 12.28% |
| HWM | 27.53% |
| IBM | 6.09% |
| ICE | 10.73% |
| IDXX | 16.09% |
| IEX | 11.50% |
| IFF | 10.00% |
| ILMN | 19.80% |
| INCY | 20.89% |
| INFO | 11.45% |
| INTC | 5.43% |
| INTU | 13.05% |
| IP | 25.83% |
| IPG | 5.05% |
| IPGP | 45.60% |
| IQV | 14.85% |
| IR | 16.07% |
| IRM | 1.70% |
| ISRG | 9.14% |
| IT | 9.95% |
| ITW | 7.15% |
| IVZ | 2.70% |
| J | 11.88% |
| JBHT | 20.73% |
| JCI | 14.31% |
| JKHY | 10.02% |

| | |
|---|---|
| JNJ | 5.60% |
| JNPR | 6.65% |
| JPM | 1.28% |
| K | 2.93% |
| KEY | 11.40% |
| KEYS | 12.41% |
| KHC | -2.88% |
| KIM | 4.60% |
| KLAC | 15.81% |
| KMB | 3.40% |
| KMI | 1.13% |
| KMX | 6.34% |
| KO | 6.14% |
| KR | 7.60% |
| KSU | 16.49% |
| L | 14.03% |
| LB | 14.02% |
| LDOS | 9.93% |
| LEG | 5.20% |
| LEN | 10.70% |
| LH | 10.93% |
| LHX | 12.88% |
| LIN | 11.71% |
| LKQ | 33.50% |
| LLY | 11.60% |
| LMT | 6.08% |
| LNC | 24.92% |
| LNT | 5.70% |
| LOW | 13.74% |
| LRCX | 22.97% |
| LUMN | 3.00% |
| LUV | -21.00% |
| LVS | -6.25% |
| LW | 9.05% |
| LYB | -4.07% |
| LYV | 80.30% |
| MA | 14.91% |
| MAA | 7.00% |
| MAR | -8.90% |
| MAS | 10.25% |
| MCD | 18.20% |
| MCHP | 11.80% |
| MCK | 10.36% |
| MCO | 9.94% |
| MDLZ | 9.45% |
| MDT | 9.08% |
| MET | 4.20% |
| MGM | -39.13% |
| MHK | 4.00% |
| MKC | 6.00% |
| MKTX | 10.47% |

| | |
|---|---|
| MLM | 8.85% |
| MMC | 8.94% |
| MNST | 15.35% |
| MO | 4.42% |
| MOS | 7.00% |
| MPC | -6.76% |
| MPWR | 25.00% |
| MRK | 8.70% |
| MRO | -19.63% |
| MS | 4.03% |
| MSCI | 14.37% |
| MSFT | 16.70% |
| MSI | 5.88% |
| MTB | 13.40% |
| MTD | 13.80% |
| MU | 37.73% |
| MXIM | 18.44% |
| NCLH | -24.13% |
| NDAQ | 6.46% |
| NEE | 8.58% |
| NEM | -1.24% |
| NFLX | 44.43% |
| NI | 4.37% |
| NKE | 34.55% |
| NLOK | 21.90% |
| NLSN | 5.30% |
| NOC | 5.44% |
| NOV | 18.90% |
| NOW | 24.37% |
| NRG | -12.70% |
| NSC | 14.30% |
| NTAP | 7.66% |
| NTRS | 6.83% |
| NUE | 7.65% |
| NVDA | 25.19% |
| NVR | 4.80% |
| NWL | 2.03% |
| NWSA | 49.01% |
| NXPI | 16.76% |
| O | 5.45% |
| ODFL | 15.89% |
| OKE | -1.60% |
| OMC | 9.80% |
| ORCL | 12.20% |
| ORLY | 9.97% |
| OTIS | 8.99% |
| OXY | -5.15% |
| PAYC | 19.10% |
| PAYX | 4.50% |
| PBCT | 13.73% |
| PCAR | 22.24% |

| | |
|---|---|
| PEAK | 2.50% |
| PEG | 2.55% |
| PENN | 141.92% |
| PEP | 9.20% |
| PFE | 10.07% |
| PFG | 9.77% |
| PG | 9.13% |
| PGR | -4.01% |
| PH | 13.73% |
| PHM | 13.80% |
| PKG | 5.97% |
| PKI | 17.20% |
| PLD | -6.05% |
| PM | 11.42% |
| PNC | -1.62% |
| PNR | 7.90% |
| PNW | 3.50% |
| POOL | 17.00% |
| PPG | 8.56% |
| PPL | -16.20% |
| PRGO | 10.00% |
| PRU | 6.34% |
| PSA | 17.00% |
| PSX | -7.75% |
| PVH | -5.85% |
| PWR | 14.96% |
| PXD | 86.00% |
| PYPL | 22.24% |
| QCOM | 24.48% |
| QRVO | 16.50% |
| RCL | 58.70% |
| RE | 61.76% |
| REG | 9.10% |
| REGN | 11.11% |
| RF | -21.60% |
| RHI | 2.70% |
| RJF | 11.26% |
| RL | 4.97% |
| RMD | 22.10% |
| ROK | 10.60% |
| ROL | 8.20% |
| ROP | 9.70% |
| ROST | 46.74% |
| RSG | 7.70% |
| RTX | 23.66% |
| SBAC | 41.62% |
| SBUX | 50.81% |
| SCHW | 9.36% |
| SEE | 7.60% |
| SHW | 10.13% |
| SIVB | 8.00% |

| | |
|---|---|
| SJM | -0.42% |
| SLB | 41.84% |
| SNA | 7.95% |
| SNPS | 11.50% |
| SO | 6.49% |
| SPG | 8.60% |
| SPGI | 11.83% |
| SRE | 6.10% |
| STE | 10.00% |
| STT | 15.22% |
| STX | 6.74% |
| STZ | 8.83% |
| SWK | 9.92% |
| SWKS | 11.95% |
| SYF | 3.05% |
| SYK | 12.39% |
| SYY | 22.94% |
| T | 1.89% |
| TAP | 2.74% |
| TDG | 15.48% |
| TDY | 12.80% |
| TEL | 11.00% |
| TER | 12.76% |
| TFC | -9.10% |
| TFX | 11.00% |
| TGT | 9.94% |
| TJX | 63.31% |
| TMO | 4.12% |
| TMUS | 38.46% |
| TPR | 48.12% |
| TRMB | 10.00% |
| TROW | 13.05% |
| TRV | 5.22% |
| TSCO | 11.08% |
| TSLA | 32.10% |
| TSN | 4.45% |
| TT | 12.56% |
| TTWO | 17.21% |
| TWTR | 0.43% |
| TXN | 10.00% |
| TXT | 23.76% |
| TYL | 10.00% |
| UA | 21.80% |
| UAA | -4.50% |
| UAL | -30.20% |
| UDR | -34.21% |
| UHS | 6.03% |
| ULTA | 41.80% |
| UNH | 12.41% |
| UNM | 1.37% |
| UNP | 12.91% |

| | |
|---|---|
| UPS | 10.06% |
| URI | 8.60% |
| USB | 6.00% |
| V | 13.84% |
| VAR | 9.90% |
| VFC | 9.89% |
| VIAC | -4.20% |
| VLO | -13.00% |
| VMC | 13.65% |
| VNO | 17.33% |
| VRSK | 10.32% |
| VRSN | 8.00% |
| VRTX | 18.33% |
| VTR | -0.50% |
| VTRS | -3.65% |
| VZ | 3.29% |
| WAB | 7.30% |
| WAT | 7.17% |
| WBA | 3.63% |
| WDC | -22.00% |
| WEC | 6.10% |
| WELL | 13.00% |
| WFC | 113.00% |
| WHR | 3.00% |
| WLTW | 5.66% |
| WM | 11.17% |
| WMB | 5.00% |
| WMT | 6.29% |
| WRB | 22.83% |
| WRK | 24.38% |
| WST | 22.60% |
| WU | 9.25% |
| WY | 5.00% |
| WYNN | -1.10% |
| XEL | 6.30% |
| XLNX | 9.00% |
| XOM | 10.59% |
| XRAY | 24.08% |
| XYL | 18.16% |
| YUM | 12.61% |
| ZBH | 11.29% |
| ZBRA | 10.00% |
| ZION | -32.40% |
| ZTS | 11.43% |

From S&P website

From IBES downloaded with PCMG proprietary software

| Company Name | Ticker Symbol | Proj EPS Growth Rate | Div'd Yield | Market Cap $ (Mil) | | | | | IBES > VL | Beta |
|---|---|---|---|---|---|---|---|---|---|---|
| 3M Company | MMM | 8.04 | 3.04 | 112,451.26 | NO | A | 10.8 | YES | 1 | 0.90 |
| Abbott Labs. | ABT | 15.58 | 1.50 | 212,878.41 | NO | AAL | -45.7 | NO | | 1.65 |
| AbbVie Inc. | ABBV | 4.1 | 4.94 | 185,709.66 | NO | AAP | 14.01 | YES | 1 | 1.15 |
| ABIOMED Inc. | ABMD | 17.1 | 0.00 | 14,500.04 | NO | AAPL | 14.69 | YES | 1 | 0.90 |
| Accenture Plc | ACN | 9.75 | 1.30 | 179,762.00 | NO | ABBV | 4.1 | YES | 1 | 0.95 |
| Activision Blizzard | ATVI | 17.83 | 0.49 | 74,976.34 | NO | ABC | 9.2 | YES | 1 | 0.90 |
| Adobe Inc. | ADBE | 17.5 | 0.00 | 236,343.38 | NO | ABMD | 17.1 | YES | 1 | 1.05 |
| Advance Auto Parts | AAP | 14.01 | 0.55 | 12,118.84 | NO | ABT | 15.58 | YES | 1 | 0.95 |
| Advanced Micro Dev. | AMD | 26.31 | 0.00 | 99,544.20 | NO | ACN | 9.75 | YES | 1 | 0.95 |
| AES Corp. | AES | 8.15 | 2.21 | 18,018.40 | NO | ADBE | 17.5 | YES | 1 | 0.75 |
| Aflac Inc. | AFL | 6.11 | 2.63 | 35,813.72 | NO | ADI | 11.78 | YES | 1 | 0.95 |
| Agilent Technologies | A | 10.8 | 0.60 | 39,448.70 | NO | ADM | 4.3 | YES | 1 | 1.00 |
| Air Products & Chem. | APD | 9.01 | 2.12 | 62,508.54 | NO | ADP | 10.26 | YES | 1 | 1.05 |
| Akamai Technologies | AKAM | 12 | 0.00 | 16,676.15 | NO | ADSK | 35.58 | YES | 1 | 0.95 |
| Alaska Air Group | ALK | -18.5 | 0.00 | 8,988.42 | NO | AEE | 7.5 | YES | 1 | 0.80 |
| Albemarle Corp. | ALB | 25.61 | 1.09 | 15,353.20 | NO | AEP | 6.15 | YES | | 0.75 |
| Alexandria Real Estate | ARE | 0.1 | 2.57 | 18,872.04 | NO | AES | 8.15 | YES | 1 | 1.05 |
| Alexion Pharmac. | ALXN | 8.78 | 0.00 | 33,440.82 | NO | AFL | 6.11 | YES | 1 | 1.25 |
| Align Techn. | ALGN | 24.14 | 0.00 | 43,568.81 | NO | AIG | 17.3 | YES | 1 | 1.50 |
| Allegion plc | ALLE | 4.2 | 1.10 | 11,981.74 | NO | AIZ | 19.4 | YES | 1 | 0.90 |
| Alliant Energy | LNT | 5.7 | 2.96 | 13,590.32 | NO | AJG | 9.67 | YES | 1 | 1.00 |
| Allstate Corp. | ALL | -0.4 | 2.78 | 35,379.52 | NO | AKAM | 12 | YES | 1 | 0.70 |
| Alphabet Inc. | GOOG | 16.95 | 0.00 | 1,519,033.50 | NO | ALB | 25.61 | YES | 1 | 1.20 |
| Alphabet Inc. 'A' | GOOGL | 16.95 | 0.00 | 1,525,260.62 | NO | ALGN | 24.14 | YES | 1 | 1.30 |
| Altria Group | MO | 4.42 | 6.73 | 95,020.96 | NO | ALK | -18.5 | NO | | 1.50 |
| Amazon.com | AMZN | 37.2 | 0.00 | 1,649,533.25 | NO | ALL | -0.4 | NO | | 1.00 |
| Amcor plc | AMCR | 7.64 | 4.04 | 18,828.97 | NO | ALLE | 4.2 | YES | 1 | 1.15 |
| Amer. Airlines | AAL | -45.7 | 0.00 | 14,872.02 | NO | ALXN | 8.78 | YES | 1 | 0.85 |
| Amer. Elec. Power | AEP | 6.15 | 3.51 | 43,050.60 | NO | AMAT | 21.28 | YES | 1 | 1.20 |
| Amer. Express | AXP | 15.6 | 1.22 | 118,439.66 | NO | AMCR | 7.64 | YES | 1 | 1.05 |
| Amer. Int'l Group | AIG | 17.3 | 2.72 | 40,562.15 | NO | AMD | 26.31 | YES | 1 | 1.15 |
| Amer. Tower 'A' | AMT | 17.31 | 2.21 | 108,731.99 | NO | AME | -1.2 | NO | | 1.15 |
| Amer. Water Works | AWK | 8.6 | 1.57 | 27,725.90 | NO | AMGN | 6.86 | YES | 1 | 0.80 |
| Ameren Corp. | AEE | 7.5 | 2.76 | 20,593.29 | NO | AMP | 10.11 | YES | 1 | 1.40 |
| Ameriprise Fin'l | AMP | 10.11 | 1.75 | 27,797.48 | NO | AMT | 17.31 | YES | 1 | 0.85 |
| AmerisourceBergen | ABC | 9.2 | 1.51 | 23,788.24 | NO | AMZN | 37.2 | YES | 1 | 0.75 |
| AMETEK, Inc. | AME | -1.2 | 0.62 | 29,863.73 | NO | ANET | 6.6 | YES | 1 | 1.10 |
| Amgen | AMGN | 6.86 | 2.91 | 143,487.80 | NO | ANSS | 8 | YES | 1 | 0.85 |
| Amphenol Corp. | APH | 11.2 | 0.86 | 40,279.79 | NO | ANTM | 13.59 | YES | 1 | 1.20 |
| Analog Devices | ADI | 11.78 | 1.73 | 58,820.15 | NO | AON | 10.41 | YES | 1 | 0.90 |

From S&P website

From IBES downloaded with PCMG proprietary software

| Company Name | Ticker Symbol | Proj EPS Growth Rate | Div'd Yield | Market Cap $ (Mil) | | | | | IBES > VL | Beta |
|---|---|---|---|---|---|---|---|---|---|---|
| ANSYS, Inc. | ANSS | 8 | 0.00 | 30,762.85 | NO | AOS | 8 | YES | 1 | 0.85 |
| Anthem, Inc. | ANTM | 13.59 | 1.28 | 86,427.78 | NO | APA | -24 | NO | | 1.90 |
| Aon plc | AON | 10.41 | 0.78 | 54,153.08 | NO | APD | 9.01 | YES | 1 | 0.90 |
| APA Corp. | APA | -24 | 0.56 | 6,799.94 | NO | APH | 11.2 | YES | 1 | 1.00 |
| Apple Inc. | AAPL | 14.69 | 0.69 | 2,151,695.25 | NO | APTV | 43.37 | YES | 1 | 1.30 |
| Applied Materials | AMAT | 21.28 | 0.69 | 127,683.37 | NO | ARE | 0.1 | YES | 1 | 0.90 |
| Aptiv PLC | APTV | 43.37 | 0.00 | 37,995.21 | NO | ATO | 7.17 | YES | 1 | 0.80 |
| Archer Daniels Midl'd | ADM | 4.3 | 2.63 | 32,159.04 | NO | ATVI | 17.83 | YES | 1 | 0.65 |
| Arista Networks | ANET | 6.6 | 0.00 | 23,447.88 | NO | AVB | 2.54 | YES | 1 | 1.10 |
| Assurant Inc. | AIZ | 19.4 | 1.81 | 8,438.98 | NO | AVGO | 8.6 | YES | 1 | 1.10 |
| AT&T Inc. | T | 1.89 | 6.72 | 220,377.64 | NO | AVY | 7.84 | YES | 1 | 1.20 |
| Atmos Energy | ATO | 7.17 | 2.65 | 12,588.47 | NO | AWK | 8.6 | YES | 1 | 0.85 |
| Autodesk, Inc. | ADSK | 35.58 | 0.00 | 62,860.56 | NO | AXP | 15.6 | YES | 1 | 1.30 |
| Automatic Data Proc. | ADP | 10.26 | 2.08 | 79,545.26 | NO | AZO | 6.7 | YES | 1 | 0.95 |
| AutoZone Inc. | AZO | 6.7 | 0.00 | 31,572.40 | NO | BA | 12.33 | YES | 1 | 1.75 |
| AvalonBay Communities | AVB | 2.54 | 3.44 | 26,200.38 | NO | BAC | 1.11 | YES | 1 | 1.25 |
| Avery Dennison | AVY | 7.84 | 1.30 | 15,848.58 | NO | BAX | 9 | YES | 1 | 0.80 |
| Baker Hughes | BKR | 3.25 | 3.36 | 15,515.32 | NO | BBY | 9.63 | YES | 1 | 1.15 |
| Ball Corp. | BLL | 13.6 | 0.69 | 28,346.02 | NO | BDX | 12 | YES | 1 | 0.80 |
| Bank of America | BAC | 1.11 | 1.80 | 346,465.09 | NO | BEN | 5.64 | YES | 1 | 1.15 |
| Bank of New York Mellor | BK | 12.59 | 2.59 | 42,422.79 | NO | BF/B | 7.53 | YES | 1 | 0.90 |
| Baxter Int'l Inc. | BAX | 9 | 1.16 | 43,258.72 | NO | BIIB | -10.08 | NO | | 0.85 |
| Becton, Dickinson | BDX | 12 | 1.38 | 70,902.45 | NO | BIO | 17.8 | YES | 1 | 0.75 |
| Berkley (W.R.) | WRB | 23.47 | 0.61 | 13,973.49 | NO | BK | 12.59 | YES | 1 | 1.15 |
| Best Buy Co. | BBY | 9.63 | 2.32 | 31,112.22 | NO | BKNG | 135.59 | YES | 1 | 1.15 |
| Bio-Rad Labs. 'A' | BIO | 17.8 | 0.00 | 17,209.24 | NO | BKR | 3.25 | YES | 1 | 1.30 |
| Biogen | BIIB | -10.08 | 0.00 | 41,248.28 | NO | BLK | 11.61 | YES | 1 | 1.25 |
| BlackRock, Inc. | BLK | 11.61 | 2.10 | 120,166.85 | NO | BLL | 13.6 | YES | 1 | 1.00 |
| Boeing | BA | 12.33 | 0.00 | 147,082.38 | NO | BMY | 7.35 | YES | 1 | 0.85 |
| Booking Holdings | BKNG | 135.59 | 0.00 | 98,725.36 | NO | BR | 10 | YES | 1 | 0.85 |
| BorgWarner | BWA | 19.41 | 1.50 | 11,125.62 | NO | BSX | 6.55 | YES | 1 | 1.05 |
| Boston Properties | BXP | 7 | 3.81 | 16,303.78 | NO | BWA | 19.41 | YES | 1 | 1.25 |
| Boston Scientific | BSX | 6.55 | 0.00 | 55,627.84 | NO | BXP | 7 | YES | 1 | 1.20 |
| Bristol-Myers Squibb | BMY | 7.35 | 3.16 | 139,262.64 | NO | C | 1.28 | YES | 1 | 1.45 |
| Broadcom Inc. | AVGO | 8.6 | 2.98 | 196,843.69 | NO | CAG | 6.33 | YES | 1 | 0.70 |
| Broadridge Fin'l | BR | 10 | 1.49 | 17,911.94 | NO | CAH | 7.57 | YES | 1 | 1.05 |
| Brown-Forman 'B' | BF/B | 7.53 | 1.02 | 33,687.53 | NO | CARR | 5.53 | YES | 1 | |
| C.H. Robinson | CHRW | 9.94 | 2.16 | 13,083.09 | NO | CAT | -1.11 | NO | | 1.10 |
| Cabot Oil & Gas 'A' | COG | 43.75 | 2.60 | 7,371.14 | NO | CB | 22.88 | YES | 1 | 1.05 |
| Cadence Design Sys. | CDNS | 11.1 | 0.00 | 39,765.83 | NO | CBOE | 1.8 | YES | 1 | 0.90 |

From S&P website

From IBES downloaded with PCMG proprietary software

| Company Name | Ticker Symbol | Proj EPS Growth Rate | Div'd Yield | Market Cap $ (Mil) | | | | | IBES > VL | Beta |
|---|---|---|---|---|---|---|---|---|---|---|
| Campbell Soup | CPB | 8.64 | 3.01 | 14,914.10 | NO | CBRE | 11 | YES | 1 | 1.50 |
| Capital One Fin'l | COF | 4.19 | 1.20 | 60,820.08 | NO | CCI | 19.6 | YES | 1 | 0.85 |
| Cardinal Health | CAH | 7.57 | 3.23 | 17,845.80 | NO | CCL | -72.42 | NO | | 1.65 |
| CarMax, Inc. | KMX | 6.34 | 0.00 | 20,558.59 | NO | CDNS | 11.1 | YES | 1 | 0.90 |
| Carnival Corp. | CCL | -72.42 | 0.00 | 30,740.00 | NO | CDW | 11.59 | YES | 1 | 1.05 |
| Carrier Global | CARR | 5.53 | 1.12 | 37,047.62 | NO | CE | 21.06 | YES | 1 | 1.15 |
| Catalent, Inc. | CTLT | 15.97 | 0.00 | 18,061.32 | NO | CERN | 11.51 | YES | 1 | 0.90 |
| Caterpillar Inc. | CAT | -1.11 | 1.79 | 125,643.27 | NO | CF | -5.21 | NO | | 1.20 |
| Cboe Global Markets | CBOE | 1.8 | 1.68 | 10,757.80 | NO | CFG | -2.76 | NO | | 1.50 |
| CBRE Group | CBRE | 11 | 0.00 | 26,307.98 | NO | CHD | 8.71 | YES | 1 | 0.60 |
| CDW Corp. | CDW | 11.59 | 0.94 | 24,168.41 | NO | CHRW | 9.94 | YES | 1 | 0.70 |
| Celanese Corp. | CE | 21.06 | 1.80 | 17,701.73 | NO | CHTR | 33.74 | YES | 1 | 0.90 |
| Centene Corp. | CNC | 10.53 | 0.00 | 36,412.22 | NO | CI | 10.35 | YES | | 1.30 |
| CenterPoint Energy | CNP | -5.88 | 2.78 | 12,879.65 | NO | CINF | 7.92 | YES | 1 | 1.10 |
| Cerner Corp. | CERN | 11.51 | 1.22 | 22,100.94 | NO | CL | 7.46 | YES | 1 | 0.70 |
| CF Industries | CF | -5.21 | 2.65 | 9,863.75 | NO | CLX | 5.07 | YES | 1 | 0.45 |
| Charter Communic. | CHTR | 33.74 | 0.00 | 118,491.08 | NO | CMA | -10.7 | NO | | 1.35 |
| Chevron Corp. | CVX | -4.9 | 4.95 | 200,585.14 | NO | CMCSA | 14.57 | YES | 1 | 0.80 |
| Chipotle Mex. Grill | CMG | 52.78 | 0.00 | 41,969.06 | NO | CME | 4.87 | YES | 1 | 0.95 |
| Chubb Ltd. | CB | 22.88 | 1.94 | 72,545.48 | NO | CMG | 52.78 | YES | 1 | 0.95 |
| Church & Dwight | CHD | 8.71 | 1.15 | 21,557.33 | NO | CMI | 14.98 | YES | 1 | 1.15 |
| Cigna Corp. | CI | 10.35 | 1.66 | 88,206.38 | NO | CMS | 7.2 | YES | | 0.75 |
| Cincinnati Financial | CINF | 7.92 | 2.39 | 16,934.72 | NO | CNC | 10.53 | YES | 1 | 1.05 |
| Cintas Corp. | CTAS | 12.85 | 0.86 | 36,795.16 | NO | CNP | -5.88 | NO | | 1.15 |
| Cisco Systems | CSCO | 6.6 | 2.86 | 218,521.16 | NO | COF | 4.19 | YES | 1 | 1.50 |
| Citigroup Inc. | C | 1.28 | 2.81 | 151,337.67 | NO | COG | 43.75 | YES | 1 | 0.85 |
| Citizens Fin'l Group | CFG | -2.76 | 3.47 | 19,220.18 | NO | COO | 10 | YES | 1 | 0.95 |
| Citrix Sys. | CTXS | 10.7 | 1.04 | 17,481.29 | NO | COP | -8.5 | NO | | 1.35 |
| Clorox Co. | CLX | 5.07 | 2.29 | 24,390.46 | NO | COST | 8.64 | YES | 1 | 0.60 |
| CME Group | CME | 4.87 | 1.76 | 73,176.81 | NO | CPB | 8.64 | YES | 1 | 0.60 |
| CMS Energy Corp. | CMS | 7.2 | 2.89 | 17,665.79 | NO | CPRT | 22.3 | YES | 1 | 1.00 |
| Coca-Cola | KO | 6.14 | 3.15 | 229,210.56 | NO | CRM | 12.92 | YES | 1 | 0.85 |
| Cognizant Technology | CTSH | 3.4 | 1.21 | 41,981.30 | NO | CSCO | 6.6 | YES | 1 | 0.95 |
| Colgate-Palmolive | CL | 7.46 | 2.26 | 67,668.48 | NO | CSX | 15.34 | YES | 1 | 1.05 |
| Comcast Corp. | CMCSA | 14.57 | 1.83 | 250,103.81 | NO | CTAS | 12.85 | YES | 1 | 1.20 |
| Comerica Inc. | CMA | -10.7 | 3.79 | 10,001.93 | NO | CTLT | 15.97 | YES | 1 | 1.05 |
| Conagra Brands | CAG | 6.33 | 3.03 | 17,873.22 | NO | CTSH | 3.4 | YES | 1 | 1.05 |
| ConocoPhillips | COP | -8.5 | 3.28 | 55,944.04 | NO | CTVA | 18.25 | YES | 1 | 0.90 |
| Consol. Edison | ED | 2.95 | 4.12 | 25,778.39 | NO | CTXS | 10.7 | YES | 1 | 0.70 |
| Constellation Brands | STZ | 9.35 | 1.28 | 45,408.73 | NO | CVS | 3.77 | YES | 1 | 0.95 |

From S&P website

From IBES downloaded with PCMG proprietary software

| Company Name | Ticker Symbol | Proj EPS Growth Rate | Div'd Yield | Market Cap $ (Mil) | | | | | IBES > VL | Beta |
|---|---|---|---|---|---|---|---|---|---|---|
| Cooper Cos. | COO | 10 | 0.02 | 18,790.08 | NO | CVX | -4.9 | NO | | 1.30 |
| Copart, Inc. | CPRT | 22.3 | 0.00 | 26,801.94 | NO | D | 2.78 | YES | 1 | 0.80 |
| Corning Inc. | GLW | 12.75 | 2.17 | 33,881.85 | NO | DAL | -26.15 | NO | | 1.55 |
| Corteva, Inc. | CTVA | 18.25 | 1.22 | 34,756.66 | NO | DD | 29.8 | YES | 1 | 1.15 |
| Costco Wholesale | COST | 8.64 | 0.82 | 158,828.69 | NO | DE | 34 | YES | 1 | 1.15 |
| Crown Castle Int'l | CCI | 19.6 | 3.17 | 75,968.06 | NO | DFS | 6.27 | YES | 1 | 1.65 |
| CSX Corp. | CSX | 15.34 | 1.15 | 73,927.19 | NO | DG | 13.57 | YES | 1 | 0.65 |
| Cummins Inc. | CMI | 14.98 | 2.09 | 38,234.97 | NO | DGX | 9.22 | YES | 1 | 0.85 |
| CVS Health | CVS | 3.77 | 2.68 | 97,507.41 | NO | DHI | 17.9 | YES | 1 | 1.15 |
| Danaher Corp. | DHR | 12.19 | 0.37 | 160,735.78 | | DHR | 12.19 | YES | 1 | 0.80 |
| Darden Restaurants | DRI | 36.64 | 2.41 | 19,070.37 | NO | DIS | 48.53 | YES | 1 | 0.95 |
| DaVita Inc. | DVA | 13.83 | 0.00 | 11,728.75 | NO | DISCA | 9.92 | YES | 1 | 1.10 |
| Deere & Co. | DE | 34 | 0.96 | 117,473.80 | NO | DISCK | 12.9 | YES | 1 | 1.15 |
| Delta Air Lines | DAL | -26.15 | 0.00 | 32,036.73 | NO | DISH | -23.01 | NO | | 1.35 |
| Dentsply Sirona | XRAY | 24.08 | 0.63 | 13,970.89 | NO | DLR | 30.98 | YES | 1 | 0.80 |
| Devon Energy | DVN | 25 | 1.95 | 8,625.16 | NO | DLTR | 9.78 | YES | 1 | 0.80 |
| DexCom Inc. | DXCM | 23.6 | 0.00 | 35,462.40 | NO | DOV | 9.5 | YES | 1 | 1.30 |
| Diamondback Energy | FANG | 49.13 | 2.10 | 12,045.53 | NO | DOW | -5.43 | NO | | 1.10 |
| Digital Realty Trust | DLR | 30.98 | 3.29 | 40,053.44 | NO | DPZ | 10.43 | YES | 1 | 0.55 |
| Discover Fin'l Svcs. | DFS | 6.27 | 1.78 | 30,291.79 | NO | DRE | 6 | YES | 1 | 0.90 |
| Discovery Communic. 'C' | DISCK | 12.9 | 0.00 | 19,425.00 | NO | DRI | 36.64 | YES | 1 | 1.45 |
| Discovery, Inc. | DISCA | 9.92 | 0.00 | 21,130.93 | NO | DTE | 4.65 | YES | 1 | 0.95 |
| Dish Network 'A' | DISH | -23.01 | 0.00 | 19,857.13 | NO | DUK | 4.99 | YES | 1 | 0.85 |
| Disney (Walt) | DIS | 48.53 | 0.00 | 334,044.34 | NO | DVA | 13.83 | YES | 1 | 1.00 |
| Dollar General | DG | 13.57 | 0.82 | 49,536.70 | NO | DVN | 25 | YES | 1 | 1.60 |
| Dollar Tree, Inc. | DLTR | 9.78 | 0.00 | 27,343.15 | NO | DXC | -8.82 | NO | | 1.50 |
| Dominion Energy | D | 2.78 | 3.31 | 61,433.32 | NO | DXCM | 23.6 | YES | 1 | 0.95 |
| Domino's Pizza | DPZ | 10.43 | 0.98 | 14,859.24 | NO | EA | 14.52 | YES | 1 | 0.60 |
| Dover Corp. | DOV | 9.5 | 1.42 | 20,041.84 | NO | EBAY | 18.79 | YES | 1 | 1.00 |
| Dow Inc. | DOW | -5.43 | 4.45 | 47,556.66 | NO | ECL | 17.07 | YES | 1 | 1.15 |
| DTE Energy | DTE | 4.65 | 3.29 | 26,294.59 | NO | ED | 2.95 | YES | 1 | 0.75 |
| Duke Energy | DUK | 4.99 | 3.99 | 75,223.59 | NO | EFX | 10.63 | YES | 1 | 1.05 |
| Duke Realty Corp. | DRE | 6 | 2.46 | 16,053.83 | NO | EIX | -0.5 | NO | | 0.95 |
| DuPont de Nemours | DD | 29.8 | 1.61 | 55,505.83 | NO | EL | 21.1 | YES | 1 | 0.95 |
| DXC Technology | DXC | -8.82 | 0.00 | 7,936.97 | NO | EMN | 3.83 | YES | 1 | 1.25 |
| Eastman Chemical | EMN | 3.83 | 2.47 | 15,153.79 | NO | EMR | 9.63 | YES | 1 | 1.25 |
| Eaton Corp. plc | ETN | 15.69 | 2.17 | 55,955.47 | NO | ENPH | 37.7 | YES | 1 | 0.90 |
| eBay Inc. | EBAY | 18.79 | 1.17 | 42,243.84 | NO | EOG | 58.35 | YES | 1 | 1.20 |
| Ecolab Inc. | ECL | 17.07 | 0.89 | 61,328.36 | NO | EQIX | 28.95 | YES | 1 | 0.85 |
| Edison Int'l | EIX | -0.5 | 4.47 | 22,719.26 | NO | EQR | 6.1 | YES | 1 | 1.05 |

From S&P website

From IBES downloaded with PCMG proprietary software

| Company Name | Ticker Symbol | Proj EPS Growth Rate | Div'd Yield | Market Cap $ (Mil) | | | | | IBES > VL | Beta |
|---|---|---|---|---|---|---|---|---|---|---|
| Edwards Lifesciences | EW | 12.99 | 0.00 | 52,516.11 | NO | ES | 7.05 | YES | 1 | 0.90 |
| Electronic Arts | EA | 14.52 | 0.49 | 40,961.79 | NO | ESS | 7.9 | YES | 1 | 1.10 |
| Emerson Electric | EMR | 9.63 | 2.23 | 54,635.78 | NO | ETN | 15.69 | YES | 1 | 1.30 |
| Enphase Energy | ENPH | 37.7 | 0.00 | 18,941.76 | NO | ETR | 5.5 | YES | 1 | 0.95 |
| Entergy Corp. | ETR | 5.5 | 3.85 | 20,368.82 | NO | ETSY | 48.1 | YES | 1 | 1.10 |
| EOG Resources | EOG | 58.35 | 2.25 | 42,775.68 | NO | EVRG | 5.65 | YES | 1 | 0.95 |
| Equifax, Inc. | EFX | 10.63 | 0.86 | 22,081.34 | NO | EW | 12.99 | YES | 1 | 1.05 |
| Equinix, Inc. | EQIX | 28.95 | 1.72 | 61,007.76 | NO | EXC | -0.34 | NO | | 0.95 |
| Equity Residential | EQR | 6.1 | 3.33 | 26,932.32 | NO | EXPD | 4.2 | YES | 1 | 0.95 |
| Essex Property Trust | ESS | 7.9 | 2.96 | 18,383.67 | NO | EXPE | -15.06 | NO | | 1.30 |
| Etsy, Inc. | ETSY | 48.1 | 0.00 | 25,672.86 | NO | EXR | 6 | YES | 1 | 0.95 |
| Everest Re Group Ltd. | RE | 62.7 | 2.46 | 10,226.05 | NO | F | 27.66 | YES | 1 | 1.30 |
| Evergy, Inc. | EVRG | 5.65 | 3.59 | 13,895.97 | NO | FANG | 49.13 | YES | 1 | 1.55 |
| Eversource Energy | ES | 7.05 | 2.75 | 30,042.77 | NO | FAST | 7.94 | YES | 1 | 0.90 |
| Exelon Corp. | EXC | -0.34 | 3.40 | 43,871.20 | NO | FB | 21.5 | YES | 1 | 0.90 |
| Expedia Group | EXPE | -15.06 | 0.00 | 24,331.45 | NO | FBHS | 9.25 | YES | 1 | 1.25 |
| Expeditors Int'l | EXPD | 4.2 | 0.97 | 18,210.95 | NO | FCX | 41.83 | YES | 1 | 1.50 |
| Extra Space Storage | EXR | 6 | 2.91 | 18,074.86 | NO | FDX | 29.41 | YES | 1 | 1.10 |
| Exxon Mobil Corp. | XOM | 10.59 | 6.15 | 239,545.45 | NO | FE | -1.97 | NO | | 0.85 |
| F5 Networks | FFIV | 6.04 | 0.00 | 12,998.19 | | FFIV | 6.04 | YES | 1 | 0.95 |
| Facebook Inc. | FB | 21.5 | 0.00 | 891,993.50 | NO | FIS | 13.97 | YES | 1 | 1.00 |
| Fastenal Co. | FAST | 7.94 | 2.24 | 28,667.81 | NO | FISV | 18.81 | YES | 1 | 1.00 |
| Federal Rlty. Inv. Trust | FRT | 6.7 | 4.07 | 8,060.17 | NO | FITB | -2.98 | NO | | 1.45 |
| FedEx Corp. | FDX | 29.41 | 0.93 | 74,059.60 | NO | FLIR | 6.4 | YES | 1 | 0.95 |
| Fidelity Nat'l Info. | FIS | 13.97 | 1.06 | 91,065.60 | NO | FLT | 12.04 | YES | 1 | 1.05 |
| Fifth Third Bancorp | FITB | -2.98 | 2.81 | 27,369.98 | NO | FMC | 9 | YES | 1 | 1.20 |
| First Republic Bank | FRC | 10.99 | 0.50 | 29,101.50 | | FRC | 10.99 | YES | 1 | 1.00 |
| FirstEnergy Corp. | FE | -1.97 | 4.45 | 19,025.39 | NO | FRT | 6.7 | YES | 1 | 1.15 |
| Fiserv Inc. | FISV | 18.81 | 0.00 | 82,527.34 | NO | FTNT | 15 | YES | 1 | 0.85 |
| FleetCor Technologies | FLT | 12.04 | 0.00 | 23,532.74 | NO | FTV | 7.05 | YES | 1 | 1.20 |
| FLIR Systems | FLIR | 6.4 | 1.19 | 7,521.62 | NO | GD | 4.83 | YES | 1 | 1.15 |
| FMC Corp. | FMC | 9 | 1.74 | 14,426.74 | NO | GE | 322.8 | YES | 1 | 1.30 |
| Ford Motor | F | 27.66 | 0.00 | 49,743.44 | NO | GILD | 3.26 | YES | 1 | 0.60 |
| Fortinet Inc. | FTNT | 15 | 0.00 | 31,334.87 | NO | GIS | 4.16 | YES | 1 | 0.65 |
| Fortive Corp. | FTV | 7.05 | 0.39 | 24,076.08 | NO | GL | 7.37 | YES | 1 | 1.20 |
| Fortune Brands Home | FBHS | 9.25 | 1.06 | 13,638.60 | NO | GLW | 12.75 | YES | 1 | 1.15 |
| Franklin Resources | BEN | 5.64 | 3.68 | 15,391.65 | NO | GM | 11.84 | YES | 1 | 1.30 |
| Freep't-McMoRan Inc. | FCX | 41.83 | 0.94 | 49,542.84 | NO | GNRC | 8 | YES | 1 | 1.05 |
| Gallagher (Arthur J.) | AJG | 9.67 | 1.48 | 25,148.07 | NO | GOOG | 16.95 | YES | 1 | 0.85 |
| Gap (The), Inc. | GPS | 4.9 | 0.00 | 11,481.80 | NO | GOOGL | 16.95 | YES | 1 | 0.85 |

From S&P website

From IBES downloaded with PCMG proprietary software

| Company Name | Ticker Symbol | Proj EPS Growth Rate | Div'd Yield | Market Cap $ (Mil) | | | | | IBES > VL | Beta |
|---|---|---|---|---|---|---|---|---|---|---|
| Garmin Ltd. | GRMN | 6.37 | 1.98 | 25,803.63 | NO | GPC | 4.6 | YES | 1 | 1.20 |
| Gartner Inc. | IT | 9.95 | 0.00 | 16,728.24 | NO | GPN | 9.73 | YES | 1 | 1.20 |
| Gen'l Dynamics | GD | 4.83 | 2.58 | 52,898.73 | NO | GPS | 4.9 | YES | 1 | 1.55 |
| Gen'l Electric | GE | 322.8 | 0.30 | 117,369.95 | NO | GRMN | 6.37 | YES | 1 | 0.95 |
| Gen'l Mills | GIS | 4.16 | 3.37 | 37,558.40 | NO | GS | 18.2 | YES | 1 | 1.20 |
| Gen'l Motors | GM | 11.84 | 0.00 | 87,066.47 | NO | GWW | 12.65 | YES | 1 | 1.05 |
| Generac Holdings | GNRC | 8 | 0.00 | 23,477.35 | NO | HAL | 15.5 | YES | 1 | 1.70 |
| Genuine Parts | GPC | 4.6 | 2.79 | 16,835.76 | NO | HAS | 17.5 | YES | 1 | 1.20 |
| Gilead Sciences | GILD | 3.26 | 4.33 | 82,262.41 | NO | HBAN | -2.15 | NO | | 1.30 |
| Global Payments | GPN | 9.73 | 0.37 | 62,754.50 | NO | HBI | 4.66 | YES | 1 | 0.90 |
| Globe Life Inc. | GL | 7.37 | 0.80 | 10,389.19 | NO | HCA | 12.39 | YES | 1 | 1.20 |
| Goldman Sachs | GS | 18.2 | 1.53 | 112,361.93 | NO | HD | 8.37 | YES | 1 | 1.00 |
| Grainger (W.W.) | GWW | 12.65 | 1.55 | 20,943.42 | NO | HES | -23.4 | NO | | 1.45 |
| Halliburton Co. | HAL | 15.5 | 0.84 | 18,956.70 | NO | HFC | -10.7 | NO | | 1.35 |
| Hanesbrands, Inc. | HBI | 4.66 | 3.01 | 6,937.90 | NO | HIG | 4.41 | YES | 1 | 1.20 |
| Hartford Fin'l Svcs. | HIG | 4.41 | 2.05 | 24,413.64 | NO | HII | 0.38 | YES | 1 | 1.05 |
| Hasbro, Inc. | HAS | 17.5 | 2.80 | 13,317.95 | NO | HLT | -6.25 | NO | | 1.10 |
| HCA Healthcare | HCA | 12.39 | 1.03 | 63,394.59 | NO | HOLX | 10.47 | YES | 1 | 1.05 |
| Healthpeak Properties | PEAK | 2.5 | 3.68 | 17,568.15 | NO | HON | 11.98 | YES | 1 | 1.20 |
| Henry (Jack) & Assoc. | JKHY | 10.02 | 1.19 | 11,731.36 | NO | HPE | 12.51 | YES | 1 | 1.35 |
| Hershey Co. | HSY | 7.6 | 2.06 | 33,435.01 | NO | HPQ | 15.07 | YES | 1 | 1.25 |
| Hess Corp. | HES | -23.4 | 1.37 | 22,419.69 | NO | HRL | 3.7 | YES | 1 | 0.55 |
| Hewlett Packard Ent. | HPE | 12.51 | 3.02 | 20,677.89 | NO | HSIC | 14.43 | YES | 1 | |
| Hilton Worldwide Hldgs. | HLT | -6.25 | 0.00 | 34,565.63 | NO | HST | 28.4 | YES | 1 | 1.10 |
| HollyFrontier Corp. | HFC | -10.7 | 4.02 | 5,984.92 | NO | HSY | 7.6 | YES | 1 | 0.85 |
| Hologic, Inc. | HOLX | 10.47 | 0.00 | 18,768.47 | NO | HUM | 12.28 | YES | 1 | 1.20 |
| Home Depot | HD | 8.37 | 2.11 | 336,217.69 | NO | HWM | 27.53 | YES | 1 | 1.70 |
| Honeywell Int'l | HON | 11.98 | 1.70 | 152,250.80 | NO | IBM | 6.09 | YES | 1 | 1.05 |
| Hormel Foods | HRL | 3.7 | 2.10 | 25,673.23 | NO | ICE | 10.2 | YES | 1 | 0.95 |
| Horton D.R. | DHI | 17.9 | 0.88 | 33,517.43 | NO | IDXX | 16.09 | YES | 1 | 1.00 |
| Host Hotels & Resorts | HST | 28.4 | 0.00 | 12,358.61 | NO | IEX | 11.5 | YES | 1 | 1.05 |
| Howmet Aerospace | HWM | 27.53 | 0.00 | 13,788.61 | NO | IFF | 10 | YES | 1 | 0.95 |
| HP Inc. | HPQ | 15.07 | 2.42 | 40,446.84 | NO | ILMN | 21.5 | YES | 1 | 0.90 |
| Humana Inc. | HUM | 12.28 | 0.68 | 54,399.00 | NO | INCY | 20.89 | YES | 1 | 0.75 |
| Hunt (J.B.) | JBHT | 20.73 | 0.68 | 17,892.51 | NO | INFO | 11.45 | YES | 1 | 1.10 |
| Huntington Bancshs. | HBAN | -2.15 | 3.72 | 16,417.54 | NO | INTC | 5.43 | YES | 1 | 0.80 |
| Huntington Ingalls | HII | 0.38 | 2.22 | 8,303.71 | NO | INTU | 12.3 | YES | 1 | 1.00 |
| IDEX Corp. | IEX | 11.5 | 0.93 | 16,213.18 | NO | IP | 25.83 | YES | 1 | 1.15 |
| IDEXX Labs. | IDXX | 16.09 | 0.00 | 41,734.73 | NO | IPG | 5.05 | YES | 1 | 1.20 |
| IHS Markit | INFO | 11.45 | 0.81 | 39,393.39 | NO | IPGP | 45.6 | YES | 1 | 0.90 |

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| Company Name | Ticker Symbol | Proj EPS Growth Rate | Div'd Yield | Market Cap $ (Mil) | | | | | IBES > VL | Beta |
|---|---|---|---|---|---|---|---|---|---|---|
| Illinois Tool Works | ITW | 7.5 | 2.07 | 69,614.18 | NO | IQV | 14.85 | YES | 1 | 1.25 |
| Illumina Inc. | ILMN | 21.5 | 0.00 | 58,480.30 | NO | IR | 15.99 | YES | 1 | |
| Incyte Corp. | INCY | 20.89 | 0.00 | 17,890.82 | NO | IRM | 1.7 | YES | | 0.90 |
| Ingersoll Rand Inc. | IR | 15.99 | 0.00 | 20,990.01 | NO | ISRG | 9.15 | YES | 1 | 1.20 |
| Int'l Business Mach. | IBM | 6.09 | 4.83 | 120,445.66 | NO | IT | 9.95 | YES | 1 | 1.20 |
| Int'l Flavors & Frag. | IFF | 10 | 2.25 | 14,810.22 | NO | ITW | 7.5 | YES | 1 | 1.05 |
| Int'l Paper | IP | 25.83 | 3.73 | 21,596.91 | NO | IVZ | 3.21 | YES | 1 | 1.50 |
| Intel Corp. | INTC | 5.43 | 2.10 | 269,107.50 | NO | J | 12.49 | YES | 1 | 1.10 |
| Intercontinental Exch. | ICE | 10.2 | 1.15 | 64,374.75 | NO | JBHT | 20.73 | YES | 1 | 0.95 |
| Interpublic Group | IPG | 5.05 | 3.66 | 11,539.37 | NO | JCI | 14.31 | YES | 1 | 1.10 |
| Intuit Inc. | INTU | 12.3 | 0.62 | 105,017.75 | NO | JKHY | 10.02 | YES | 1 | 0.85 |
| Intuitive Surgical | ISRG | 9.15 | 0.00 | 89,419.85 | NO | JNJ | 8.14 | YES | 1 | 0.85 |
| Invesco Ltd. | IVZ | 3.21 | 2.39 | 11,919.74 | NO | JNPR | 6.65 | YES | 1 | 1.00 |
| IPG Photonics | IPGP | 45.6 | 0.00 | 11,750.74 | NO | JPM | 1.28 | YES | 1 | 1.15 |
| IQVIA Holdings | IQV | 14.85 | 0.00 | 38,646.72 | NO | K | 2.93 | YES | 1 | 0.65 |
| Iron Mountain | IRM | 1.7 | 6.58 | 10,860.86 | NO | KEY | 11.4 | YES | 1 | 1.45 |
| Jacobs Engineering | J | 12.49 | 0.64 | 17,093.10 | NO | KEYS | 12.41 | YES | 1 | 0.85 |
| Johnson & Johnson | JNJ | 8.14 | 2.47 | 430,648.81 | NO | KHC | -2.88 | NO | | 0.90 |
| Johnson Ctrls. Int'l plc | JCI | 14.31 | 1.80 | 43,324.36 | NO | KIM | 4.6 | YES | 1 | 1.20 |
| JPMorgan Chase | JPM | 1.28 | 2.32 | 472,448.78 | NO | KLAC | 14.9 | YES | 1 | 1.15 |
| Juniper Networks | JNPR | 6.65 | 3.23 | 8,330.13 | NO | KMB | 3.65 | YES | 1 | 0.70 |
| Kansas City South'n | KSU | 16.61 | 0.82 | 24,037.32 | NO | KMI | 1.13 | YES | 1 | 1.20 |
| Kellogg | K | 2.93 | 3.66 | 21,895.48 | NO | KMX | 6.34 | YES | 1 | 1.25 |
| KeyCorp | KEY | 11.4 | 3.60 | 20,042.38 | NO | KO | 6.14 | YES | 1 | 0.90 |
| Keysight Technologies | KEYS | 12.41 | 0.00 | 26,817.89 | NO | KR | 7.6 | YES | 1 | 0.45 |
| Kimberly-Clark | KMB | 3.65 | 3.33 | 46,384.86 | NO | KSU | 16.61 | YES | 1 | 1.05 |
| Kimco Realty | KIM | 4.6 | 4.12 | 8,390.87 | NO | L | 14.03 | YES | 1 | 1.15 |
| Kinder Morgan Inc. | KMI | 1.13 | 6.20 | 38,333.87 | NO | LB | 14.02 | YES | 1 | 1.55 |
| KLA Corp. | KLAC | 14.9 | 1.03 | 53,654.19 | NO | LDOS | 9.93 | YES | 1 | 1.10 |
| Kraft Heinz Co. | KHC | -2.88 | 3.94 | 49,702.72 | NO | LEG | 5.2 | YES | 1 | 1.25 |
| Kroger Co. | KR | 7.6 | 2.10 | 28,159.70 | NO | LEN | 10.7 | YES | 1 | 1.30 |
| L Brands | LB | 14.02 | 0.93 | 17,872.62 | NO | LH | 10.93 | YES | 1 | 1.15 |
| L3Harris Technologies | LHX | 11.49 | 1.96 | 45,255.35 | | LHX | 11.49 | YES | 1 | |
| Laboratory Corp. | LH | 10.93 | 0.00 | 24,574.02 | NO | LIN | 11.71 | YES | 1 | 0.95 |
| Lam Research | LRCX | 22.97 | 0.83 | 94,340.59 | NO | LKQ | 33.5 | YES | 1 | 1.50 |
| Lamb Weston Holdings | LW | 10.65 | 1.22 | 11,389.58 | NO | LLY | 11.6 | YES | 1 | 0.75 |
| Las Vegas Sands | LVS | -6.25 | 0.00 | 47,457.56 | NO | LMT | 6.08 | YES | 1 | 0.95 |
| Lauder (Estee) | EL | 21.1 | 0.75 | 107,023.88 | NO | LNC | 24.92 | YES | 1 | 1.90 |
| Leggett & Platt | LEG | 5.2 | 3.44 | 6,167.23 | NO | LNT | 5.7 | YES | 1 | 0.85 |
| Leidos Hldgs. | LDOS | 9.93 | 1.38 | 13,991.26 | NO | LOW | 13.74 | YES | | 1.15 |

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| Company Name | Ticker Symbol | Proj EPS Growth Rate | Div'd Yield | Market Cap $ (Mil) | | | | | IBES > VL | Beta |
|---|---|---|---|---|---|---|---|---|---|---|
| Lennar Corp. | LEN | 10.7 | 0.99 | 32,400.56 | NO | LRCX | 22.97 | YES | 1 | 1.35 |
| Lilly (Eli) | LLY | 11.6 | 1.87 | 174,405.50 | NO | LUMN | 3 | YES | 1 | 1.00 |
| Lincoln Nat'l Corp. | LNC | 24.92 | 2.73 | 12,266.74 | NO | LUV | -21 | NO | | 1.10 |
| Linde plc | LIN | 11.71 | 1.54 | 147,668.50 | NO | LVS | -6.25 | NO | | 1.05 |
| Live Nation Entertain. | LYV | 80.3 | 0.00 | 18,819.70 | NO | LW | 10.65 | YES | 1 | 1.15 |
| LKQ Corp. | LKQ | 33.5 | 0.00 | 13,337.44 | NO | LYB | -4.07 | NO | | 1.35 |
| Lockheed Martin | LMT | 6.08 | 2.79 | 106,073.01 | NO | LYV | 80.3 | YES | 1 | 1.25 |
| Loews Corp. | L | 14.03 | 0.47 | 14,370.36 | NO | MA | 14.91 | YES | 1 | 1.10 |
| Lowe's Cos. | LOW | 13.74 | 1.29 | 145,639.84 | NO | MAA | 7 | YES | 1 | 1.00 |
| Lumen Technologies | LUMN | 3 | 7.42 | 14,786.50 | NO | MAR | 612.6 | YES | 1 | 1.30 |
| LyondellBasell Inds. | LYB | -4.07 | 4.05 | 34,603.96 | NO | MAS | 10.25 | YES | 1 | 1.10 |
| M&T Bank Corp. | MTB | 13.4 | 2.85 | 19,787.67 | NO | MCD | 18.2 | YES | 1 | 0.95 |
| Marathon Oil Corp. | MRO | -19.63 | 1.10 | 8,631.66 | NO | MCHP | 11.8 | YES | 1 | 1.10 |
| Marathon Petroleum | MPC | -6.76 | 4.30 | 35,039.51 | NO | MCK | 10.35 | YES | 1 | 1.00 |
| MarketAxess Holdings | MKTX | 10.29 | 0.51 | 19,800.98 | NO | MCO | 9.28 | YES | 1 | 1.15 |
| Marriott Int'l | MAR | 612.6 | 0.00 | 48,273.96 | NO | MDLZ | 9.45 | YES | 1 | 0.90 |
| Marsh & McLennan | MMC | 8.93 | 1.53 | 62,480.09 | NO | MDT | 9.08 | YES | 1 | 0.95 |
| Martin Marietta | MLM | 8.85 | 0.69 | 21,006.94 | NO | MET | 4.2 | YES | 1 | 1.40 |
| Masco Corp. | MAS | 10.25 | 1.54 | 15,776.02 | NO | MGM | -39.13 | NO | | 1.80 |
| MasterCard Inc. | MA | 14.91 | 0.47 | 369,224.62 | NO | MHK | 4 | YES | 1 | 1.40 |
| Maxim Integrated | MXIM | 18.44 | 0.00 | 25,554.17 | NO | MKC | 6 | YES | 1 | 0.80 |
| McCormick & Co. | MKC | 6 | 1.54 | 23,808.84 | NO | MKTX | 10.29 | YES | 1 | 0.75 |
| McDonald's Corp. | MCD | 18.2 | 2.24 | 173,387.48 | NO | MLM | 8.85 | YES | 1 | 1.15 |
| McKesson Corp. | MCK | 10.35 | 0.87 | 30,760.62 | NO | MMC | 8.93 | YES | 1 | 0.95 |
| Medtronic plc | MDT | 9.08 | 1.99 | 162,545.31 | NO | MMM | 8.04 | YES | 1 | 0.95 |
| Merck & Co. | MRK | 8.7 | 3.42 | 192,600.80 | NO | MNST | 15.35 | YES | 1 | 0.85 |
| MetLife Inc. | MET | 4.2 | 2.98 | 55,946.24 | NO | MO | 4.42 | YES | 1 | 0.90 |
| Mettler-Toledo Int'l | MTD | 13.8 | 0.00 | 28,162.65 | NO | MOS | 7 | YES | 1 | 1.25 |
| MGM Resorts Int'l | MGM | -39.13 | 0.02 | 20,311.53 | NO | MPC | -6.76 | NO | | 1.70 |
| Microchip Technology | MCHP | 11.8 | 0.98 | 43,003.19 | NO | MPWR | 25 | YES | 1 | 0.95 |
| Micron Technology | MU | 60.47 | 0.00 | 105,329.17 | NO | MRK | 8.7 | YES | 1 | 0.85 |
| Microsoft Corp. | MSFT | 18.17 | 0.90 | 1,885,745.38 | NO | MRO | -19.63 | NO | | 1.50 |
| Mid-America Apartment | MAA | 7 | 2.77 | 16,942.68 | NO | MS | 4.33 | YES | 1 | 1.30 |
| Mohawk Inds. | MHK | 4 | 0.00 | 13,896.77 | NO | MSCI | 14.37 | YES | 1 | 0.95 |
| Molson Coors Beverage | TAP | 2.74 | 2.22 | 11,207.72 | NO | MSFT | 18.17 | YES | 1 | 0.90 |
| Mondelez Int'l | MDLZ | 9.45 | 2.28 | 84,000.91 | NO | MSI | 5.88 | YES | 1 | 0.90 |
| Monolithic Power Sys. | MPWR | 25 | 0.64 | 16,890.02 | NO | MTB | 13.4 | YES | 1 | 1.15 |
| Monster Beverage | MNST | 15.35 | 0.00 | 49,762.58 | NO | MTD | 13.8 | YES | 1 | 0.95 |
| Moody's Corp. | MCO | 9.28 | 0.81 | 57,837.20 | NO | MU | 60.47 | YES | 1 | 1.20 |
| Morgan Stanley | MS | 4.33 | 1.77 | 143,032.67 | NO | MXIM | 18.44 | YES | 1 | 0.95 |

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|---|---|---|---|---|---|---|---|---|---|---|
| Mosaic Company | MOS | 7 | 0.97 | 11,676.00 | NO | NCLH | -24.13 | NO | | 1.80 |
| Motorola Solutions | MSI | 5.88 | 1.50 | 32,174.14 | NO | NDAQ | 6.37 | YES | 1 | 1.05 |
| MSCI Inc. | MSCI | 14.37 | 0.78 | 36,326.72 | NO | NEE | 8.59 | YES | 1 | 0.90 |
| Nasdaq, Inc. | NDAQ | 6.37 | 1.30 | 24,868.60 | NO | NEM | -1.24 | NO | | 0.55 |
| NetApp, Inc. | NTAP | 7.66 | 2.82 | 16,428.41 | NO | NFLX | 44.43 | YES | 1 | 0.70 |
| Netflix, Inc. | NFLX | 44.43 | 0.00 | 242,259.12 | NO | NI | 4.37 | YES | 1 | 0.85 |
| Newell Brands | NWL | 2.03 | 3.40 | 11,480.02 | NO | NKE | 34.55 | YES | 1 | 1.15 |
| Newmont Corp. | NEM | -1.24 | 3.55 | 49,608.00 | NO | NLOK | 21.9 | YES | 1 | |
| News Corp. 'A' | NWSA | 49.01 | 0.76 | 15,606.64 | NO | NLSN | 5.3 | YES | 1 | 1.05 |
| NextEra Energy | NEE | 8.59 | 1.99 | 151,723.61 | NO | NOC | 5.44 | YES | 1 | 0.85 |
| Nielsen Hldgs. plc | NLSN | 5.3 | 0.96 | 8,957.11 | NO | NOV | 18.9 | YES | 1 | 1.30 |
| NIKE, Inc. 'B' | NKE | 34.55 | 0.81 | 215,596.67 | NO | NOW | 23.5 | YES | 1 | 0.90 |
| NiSource Inc. | NI | 4.37 | 3.57 | 9,436.10 | NO | NRG | -12.7 | NO | | 1.20 |
| Norfolk Southern | NSC | 13.87 | 1.46 | 68,438.74 | | NSC | 13.87 | YES | 1 | 1.10 |
| Northern Trust Corp. | NTRS | 7.05 | 2.62 | 22,233.57 | NO | NTAP | 7.66 | YES | 1 | 1.15 |
| Northrop Grumman | NOC | 5.44 | 1.74 | 55,678.47 | NO | NTRS | 7.05 | YES | 1 | 1.10 |
| NortonLifeLock Inc. | NLOK | 21.9 | 2.30 | 12,767.25 | NO | NUE | 8.22 | YES | 1 | 1.20 |
| Norwegian Cruise Line | NCLH | -24.13 | 0.00 | 9,882.56 | NO | NVDA | 25.19 | YES | 1 | 1.10 |
| NOV Inc. | NOV | 18.9 | 0.00 | 5,251.92 | NO | NVR | 4.8 | YES | 1 | 1.15 |
| NRG Energy | NRG | -12.7 | 3.41 | 9,314.21 | NO | NWL | 2.03 | YES | 1 | 1.20 |
| Nucor Corp. | NUE | 8.22 | 2.03 | 24,096.87 | NO | NWSA | 49.01 | YES | 1 | 1.10 |
| NVIDIA Corp. | NVDA | 25.19 | 0.11 | 350,758.78 | NO | NXPI | 16.76 | YES | 1 | 1.10 |
| NVR, Inc. | NVR | 4.8 | 0.00 | 17,653.61 | NO | O | 5.45 | YES | 1 | 1.05 |
| NXP Semiconductors NV | NXPI | 16.76 | 1.06 | 59,499.96 | NO | ODFL | 15.89 | YES | 1 | 0.90 |
| O'Reilly Automotive | ORLY | 10.07 | 0.00 | 36,460.50 | NO | OKE | -1.6 | NO | | 1.50 |
| Occidental Petroleum | OXY | -5.15 | 0.32 | 23,564.04 | NO | OMC | 9.8 | YES | 1 | 1.00 |
| Old Dominion Freight | ODFL | 15.89 | 0.34 | 28,558.37 | NO | ORCL | 12.2 | YES | 1 | 0.75 |
| Omnicom Group | OMC | 9.8 | 3.61 | 16,692.60 | NO | ORLY | 10.07 | YES | 1 | 0.95 |
| ONEOK Inc. | OKE | -1.6 | 7.53 | 22,750.75 | NO | OTIS | 8.99 | YES | 1 | |
| Oracle Corp. | ORCL | 12.2 | 1.73 | 214,432.67 | NO | OXY | -5.15 | NO | | 1.60 |
| Otis Worldwide | OTIS | 8.99 | 1.15 | 30,177.64 | NO | PAYC | 27.1 | YES | 1 | 1.15 |
| PACCAR Inc. | PCAR | 22.24 | 3.57 | 32,050.10 | NO | PAYX | 4.85 | YES | 1 | 1.15 |
| Packaging Corp. | PKG | 5.97 | 2.90 | 13,091.28 | NO | PBCT | 13.73 | YES | 1 | 1.05 |
| Parker-Hannifin | PH | 13.73 | 1.11 | 40,898.03 | NO | PCAR | 22.24 | YES | 1 | 1.05 |
| Paychex, Inc. | PAYX | 4.85 | 2.79 | 34,160.04 | NO | PEAK | 2.5 | YES | 1 | 1.05 |
| Paycom Software | PAYC | 27.1 | 0.00 | 21,478.91 | NO | PEG | 2.55 | YES | 1 | 0.90 |
| PayPal Holdings | PYPL | 22.24 | 0.00 | 299,563.22 | NO | PENN | 141.92 | YES | 1 | 1.75 |
| Penn Nat'l Gaming | PENN | 141.92 | 0.00 | 15,893.35 | NO | PEP | 9.27 | YES | 1 | 0.80 |
| Pentair plc | PNR | 7.9 | 1.30 | 10,212.94 | NO | PFE | 10.07 | YES | 1 | 0.85 |
| People's United Fin'l | PBCT | 13.73 | 4.06 | 7,639.99 | NO | PFG | 9.77 | YES | 1 | 1.45 |

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|---|---|---|---|---|---|---|---|---|---|---|
| PepsiCo, Inc. | PEP | 9.27 | 3.00 | 197,905.81 | NO | PG | 9.13 | YES | 1 | 0.70 |
| PerkinElmer Inc. | PKI | 17.2 | 0.22 | 14,564.28 | NO | PGR | -9.11 | NO | | 0.75 |
| Perrigo Co. plc | PRGO | 10 | 2.40 | 5,378.57 | NO | PH | 13.73 | YES | 1 | 1.45 |
| Pfizer, Inc. | PFE | 10.07 | 4.34 | 199,910.98 | NO | PHM | 13.8 | YES | 1 | 1.40 |
| Philip Morris Int'l | PM | 11.12 | 5.44 | 137,484.97 | NO | PKG | 5.97 | YES | 1 | 1.00 |
| Phillips 66 | PSX | -7.75 | 4.62 | 34,944.00 | NO | PKI | 17.2 | YES | 1 | 0.95 |
| Pinnacle West Capital | PNW | 3.5 | 4.16 | 9,275.64 | NO | PLD | -6.05 | NO | | 1.00 |
| Pioneer Natural Res. | PXD | 91.92 | 1.47 | 25,252.15 | NO | PM | 11.12 | YES | 1 | 0.95 |
| PNC Financial Serv. | PNC | -1.62 | 2.58 | 75,578.00 | | PNC | -1.62 | NO | | 1.20 |
| Pool Corp. | POOL | 17 | 0.65 | 14,348.74 | NO | PNR | 7.9 | YES | 1 | 1.25 |
| PPG Inds. | PPG | 8.56 | 1.46 | 35,022.43 | NO | PNW | 3.5 | YES | 1 | 0.90 |
| PPL Corp. | PPL | -16.2 | 5.76 | 22,298.30 | NO | POOL | 17 | YES | 1 | 0.85 |
| Price (T. Rowe) Group | TROW | 13.43 | 2.44 | 40,057.06 | NO | PPG | 8.56 | YES | 1 | 1.10 |
| Principal Fin'l Group | PFG | 9.77 | 3.61 | 17,019.00 | NO | PPL | -16.2 | NO | | 1.10 |
| Procter & Gamble | PG | 9.13 | 2.31 | 336,718.94 | NO | PRGO | 10 | YES | 1 | 1.00 |
| Progressive Corp. | PGR | -9.11 | 0.42 | 56,097.27 | NO | PRU | 6.34 | YES | 1 | 1.55 |
| Prologis | PLD | -6.05 | 2.34 | 81,058.34 | NO | PSA | 17 | YES | 1 | 0.85 |
| Prudential Fin'l | PRU | 6.34 | 4.90 | 37,150.84 | NO | PSX | -7.75 | NO | | 1.35 |
| Public Serv. Enterprise | PEG | 2.55 | 3.33 | 30,859.92 | NO | PVH | -4.87 | NO | | 1.80 |
| Public Storage | PSA | 17 | 3.15 | 44,644.11 | NO | PWR | 14.96 | YES | 1 | 1.25 |
| PulteGroup, Inc. | PHM | 13.8 | 1.07 | 14,263.82 | NO | PXD | 91.92 | YES | 1 | 1.30 |
| PVH Corp. | PVH | -4.87 | 0.00 | 7,325.82 | NO | PYPL | 22.24 | YES | 1 | 0.90 |
| Qorvo Inc. | QRVO | 16.5 | 0.00 | 21,944.88 | NO | QCOM | 24.48 | YES | 1 | 1.00 |
| Qualcomm Inc. | QCOM | 24.48 | 1.95 | 158,392.47 | NO | QRVO | 16.5 | YES | 1 | 1.10 |
| Quanta Services | PWR | 14.96 | 0.26 | 12,599.13 | NO | RCL | 58.7 | YES | 1 | 1.65 |
| Quest Diagnostics | DGX | 9.22 | 1.94 | 16,989.42 | NO | RE | 62.7 | YES | 1 | 0.95 |
| Ralph Lauren | RL | 4.97 | 0.00 | 9,038.08 | NO | REG | 9.1 | YES | 1 | 1.10 |
| Raymond James Fin'l | RJF | 18.66 | 1.23 | 17,489.72 | NO | REGN | 11.11 | YES | 1 | 0.65 |
| Raytheon Technologies | RTX | 23.66 | 2.47 | 117,908.40 | NO | RF | -21.6 | NO | | 1.40 |
| Realty Income Corp. | O | 5.45 | 4.39 | 23,683.41 | NO | RHI | 2.7 | YES | 1 | 1.25 |
| Regency Centers Corp. | REG | 9.1 | 4.08 | 9,764.36 | NO | RJF | 18.66 | YES | 1 | 1.20 |
| Regeneron Pharmac. | REGN | 11.11 | 0.00 | 50,636.61 | NO | RL | 4.97 | YES | 1 | 1.25 |
| Regions Financial | RF | -21.6 | 2.94 | 20,285.21 | NO | RMD | 22.1 | YES | 1 | 0.90 |
| Republic Services | RSG | 7.7 | 1.71 | 36,283.47 | NO | ROK | 10.6 | YES | 1 | 1.15 |
| ResMed Inc. | RMD | 22.1 | 0.79 | 28,681.75 | NO | ROL | 8.2 | YES | 1 | 0.85 |
| Robert Half Int'l | RHI | 2.7 | 1.95 | 9,002.65 | NO | ROP | 9.7 | YES | 1 | 1.00 |
| Rockwell Automation | ROK | 10.6 | 1.66 | 30,337.37 | NO | ROST | 46.74 | YES | 1 | 1.25 |
| Rollins, Inc. | ROL | 8.2 | 0.93 | 16,951.16 | NO | RSG | 7.7 | YES | 1 | 0.90 |
| Roper Tech. | ROP | 9.7 | 0.54 | 43,506.23 | NO | RTX | 23.66 | YES | 1 | |
| Ross Stores | ROST | 46.74 | 0.00 | 43,989.37 | NO | SBAC | 104.68 | YES | 1 | 0.85 |

From S&P website

From IBES downloaded with PCMG proprietary software

| Company Name | Ticker Symbol | Proj EPS Growth Rate | Div'd Yield | Market Cap $ (Mil) | | | | | IBES > VL | Beta |
|---|---|---|---|---|---|---|---|---|---|---|
| Royal Caribbean | RCL | 58.7 | 0.00 | 21,612.80 | NO | SBUX | 50.81 | YES | 1 | 1.00 |
| S&P Global | SPGI | 10.96 | 0.85 | 87,049.20 | NO | SCHW | 14.19 | YES | 1 | 1.15 |
| salesforce.com | CRM | 12.92 | 0.00 | 201,802.06 | NO | SEE | 7.6 | YES | 1 | 1.05 |
| SBA Communications | SBAC | 104.68 | 0.82 | 31,670.99 | NO | SHW | 9.7 | YES | 1 | 0.90 |
| Schein (Henry) | HSIC | 14.43 | 0.00 | 9,781.03 | NO | SIVB | 8 | YES | 1 | 1.20 |
| Schlumberger Ltd. | SLB | 41.84 | 1.83 | 38,080.11 | NO | SJM | -0.42 | NO | | 0.65 |
| Schwab (Charles) | SCHW | 14.19 | 1.12 | 120,778.38 | NO | SLB | 41.84 | YES | 1 | 1.35 |
| Seagate Technology | STX | 6.74 | 3.39 | 18,930.66 | NO | SNA | 7.95 | YES | 1 | 1.15 |
| Sealed Air | SEE | 7.6 | 1.42 | 7,002.53 | NO | SNPS | 11.5 | YES | 1 | 0.95 |
| Sempra Energy | SRE | 5.2 | 3.37 | 38,516.51 | NO | SO | 6.49 | YES | 1 | 0.95 |
| ServiceNow, Inc. | NOW | 23.5 | 0.00 | 99,617.88 | NO | SPG | 8.6 | YES | 1 | 1.50 |
| Sherwin-Williams | SHW | 9.7 | 0.91 | 67,625.75 | NO | SPGI | 10.96 | YES | 1 | 1.00 |
| Simon Property Group | SPG | 8.6 | 4.44 | 38,436.96 | NO | SRE | 5.2 | YES | 1 | 0.95 |
| Skyworks Solutions | SWKS | 11.95 | 1.07 | 30,874.23 | NO | STE | 10 | YES | 1 | 1.05 |
| Smith (A.O.) | AOS | 8 | 1.54 | 10,903.30 | NO | STT | 16 | YES | 1 | 1.25 |
| Smucker (J.M.) | SJM | -0.42 | 2.86 | 14,036.52 | NO | STX | 6.74 | YES | 1 | 1.05 |
| Snap-on Inc. | SNA | 7.95 | 2.16 | 12,724.79 | NO | STZ | 9.35 | YES | 1 | 1.20 |
| Southern Co. | SO | 6.49 | 4.17 | 66,345.95 | NO | SWK | 9.92 | YES | 1 | 1.50 |
| Southwest Airlines | LUV | -21 | 0.00 | 37,506.91 | NO | SWKS | 11.95 | YES | 1 | 1.10 |
| Stanley Black & Decker | SWK | 9.92 | 1.41 | 35,423.05 | NO | SYF | 3.05 | YES | 1 | 1.60 |
| Starbucks Corp. | SBUX | 50.81 | 1.68 | 133,247.27 | NO | SYK | 12.41 | YES | 1 | 1.15 |
| State Street Corp. | STT | 16 | 2.45 | 29,926.44 | NO | SYY | 23.41 | YES | 1 | 1.30 |
| STERIS plc | STE | 10 | 0.83 | 16,537.46 | NO | T | 1.89 | YES | 1 | 0.85 |
| Stryker Corp. | SYK | 12.41 | 1.02 | 92,987.95 | NO | TAP | 2.74 | YES | 1 | 1.05 |
| SVB Fin'l Group | SIVB | 8 | 0.00 | 25,095.95 | NO | TDG | 15.48 | YES | 1 | 1.20 |
| Synchrony Financial | SYF | 3.05 | 2.07 | 24,804.22 | NO | TDY | 12.8 | YES | 1 | 1.15 |
| Synopsys, Inc. | SNPS | 11.5 | 0.00 | 39,157.55 | NO | TEL | 11 | YES | 1 | 1.15 |
| Sysco Corp. | SYY | 23.41 | 2.23 | 41,131.34 | NO | TER | 12.76 | YES | 1 | 1.10 |
| T-Mobile US | TMUS | 38.46 | 0.00 | 161,459.61 | NO | TFC | -9.1 | NO | | 1.30 |
| Take-Two Interactive | TTWO | 17.21 | 0.00 | 21,134.99 | NO | TFX | 11 | YES | 1 | 1.15 |
| Tapestry Inc. | TPR | 48.12 | 0.00 | 11,970.40 | NO | TGT | 9.94 | YES | 1 | 0.70 |
| Target Corp. | TGT | 9.94 | 1.33 | 102,379.37 | NO | TJX | 63.31 | YES | 1 | 1.15 |
| TE Connectivity | TEL | 11 | 1.54 | 42,879.65 | NO | TMO | 4.12 | YES | 1 | 0.85 |
| Teledyne Technologies | TDY | 12.8 | 0.00 | 15,337.30 | NO | TMUS | 38.46 | YES | 1 | 0.80 |
| Teleflex Inc. | TFX | 11 | 0.32 | 19,587.39 | NO | TPR | 48.12 | YES | 1 | 1.45 |
| Teradyne Inc. | TER | 12.76 | 0.30 | 21,881.15 | NO | TRMB | 10 | YES | 1 | 1.20 |
| Tesla, Inc. | TSLA | 32.1 | 0.00 | 636,079.56 | NO | TROW | 13.43 | YES | 1 | 1.05 |
| Texas Instruments | TXN | 10 | 2.11 | 177,518.06 | NO | TRV | 5.97 | YES | 1 | 1.00 |
| Textron, Inc. | TXT | 23.76 | 0.14 | 12,923.16 | NO | TSCO | 11.08 | YES | 1 | 0.80 |
| Thermo Fisher Sci. | TMO | 4.12 | 0.22 | 184,842.72 | NO | TSLA | 32.1 | YES | 1 | 1.25 |

From S&P website

From IBES downloaded with PCMG proprietary software

| Company Name | Ticker Symbol | Proj EPS Growth Rate | Div'd Yield | Market Cap $ (Mil) | | | | | IBES > VL | Beta |
|---|---|---|---|---|---|---|---|---|---|---|
| TJX Companies | TJX | 63.31 | 1.53 | 81,378.77 | NO | TSN | 4.45 | YES | 1 | 0.75 |
| Tractor Supply | TSCO | 11.08 | 1.17 | 20,582.52 | NO | TT | 12.56 | YES | 1 | |
| Trane Technologies plc | TT | 12.56 | 1.42 | 39,761.53 | NO | TTWO | 17.21 | YES | 1 | 0.60 |
| TransDigm Group | TDG | 15.48 | 0.00 | 33,145.52 | NO | TWTR | 0.43 | YES | 1 | 1.00 |
| Travelers Cos. | TRV | 5.97 | 2.23 | 38,438.00 | NO | TXN | 10 | YES | 1 | 0.85 |
| Trimble Inc. | TRMB | 10 | 0.00 | 19,998.79 | NO | TXT | 23.76 | YES | 1 | 1.45 |
| Truist Fin'l | TFC | -9.1 | 3.03 | 80,168.75 | NO | TYL | 10 | YES | 1 | 0.75 |
| Twitter Inc. | TWTR | 0.43 | 0.00 | 54,808.90 | NO | UA | 21.8 | YES | 1 | 1.25 |
| Tyler Technologies | TYL | 10 | 0.00 | 17,515.69 | NO | UAA | -4.5 | NO | | 1.30 |
| Tyson Foods 'A' | TSN | 4.45 | 2.35 | 27,637.80 | NO | UAL | -25.4 | NO | | 1.65 |
| U.S. Bancorp | USB | 6 | 2.96 | 85,618.80 | NO | UDR | -34.21 | NO | | 1.10 |
| UDR, Inc. | UDR | -34.21 | 3.29 | 13,234.83 | NO | UHS | 5.98 | YES | 1 | 1.25 |
| Ulta Beauty | ULTA | 41.8 | 0.00 | 17,784.35 | | ULTA | 41.8 | YES | 1 | 1.30 |
| Under Armour 'A' | UAA | -4.5 | 0.00 | 10,380.09 | NO | UNH | 12.41 | YES | 1 | 1.10 |
| Under Armour 'C' | UA | 21.8 | 0.00 | 8,556.87 | NO | UNM | 1.37 | YES | | 1.70 |
| Union Pacific | UNP | 12.94 | 1.75 | 148,596.83 | | UNP | 12.94 | YES | 1 | 1.10 |
| United Airlines Hldgs. | UAL | -25.4 | 0.00 | 17,334.27 | NO | UPS | 10.06 | YES | 1 | 0.80 |
| United Parcel Serv. | UPS | 10.06 | 2.44 | 148,496.03 | NO | URI | 8.6 | YES | 1 | 1.55 |
| United Rentals | URI | 8.6 | 0.00 | 23,247.43 | NO | USB | 6 | YES | 1 | 1.15 |
| UnitedHealth Group | UNH | 12.41 | 1.37 | 346,992.38 | NO | V | 13.84 | YES | 1 | 1.00 |
| Universal Health `B' | UHS | 5.98 | 0.59 | 11,609.39 | NO | VAR | 9.9 | YES | 1 | 1.00 |
| Unum Group | UNM | 1.37 | 4.08 | 5,694.38 | NO | VFC | 9.89 | YES | 1 | 1.25 |
| V.F. Corp. | VFC | 9.89 | 2.33 | 32,835.00 | NO | VIAC | -4.2 | NO | | 1.45 |
| Valero Energy | VLO | -13 | 5.27 | 30,389.42 | | VLO | -13 | NO | | 1.60 |
| Varian Medical Sys. | VAR | 9.9 | 0.00 | 16,097.93 | NO | VMC | 13.65 | YES | 1 | 1.10 |
| Ventas, Inc. | VTR | -0.5 | 3.39 | 20,416.19 | NO | VNO | 17.33 | YES | 1 | 1.25 |
| VeriSign Inc. | VRSN | 8 | 0.00 | 23,189.86 | NO | VRSK | 10.32 | YES | 1 | 0.90 |
| Verisk Analytics | VRSK | 10.32 | 0.64 | 29,293.55 | NO | VRSN | 8 | YES | 1 | 0.90 |
| Verizon Communic. | VZ | 3.29 | 4.30 | 244,147.55 | NO | VRTX | 18.33 | YES | 1 | 0.80 |
| Vertex Pharmac. | VRTX | 18.33 | 0.00 | 55,283.80 | NO | VTR | -0.5 | NO | | 1.30 |
| ViacomCBS Inc. | VIAC | -4.2 | 2.19 | 27,036.24 | NO | VTRS | -3.65 | NO | | |
| Viatris Inc. | VTRS | -3.65 | 0.00 | | NO | VZ | 3.29 | YES | 1 | 0.65 |
| Visa Inc. | V | 13.84 | 0.59 | 428,015.03 | NO | WAB | 7.3 | YES | 1 | 1.25 |
| Vornado R'lty Trust | VNO | 17.33 | 4.62 | 8,788.93 | NO | WAT | 7.17 | YES | 1 | 0.95 |
| Vulcan Materials | VMC | 13.65 | 0.88 | 22,383.28 | NO | WBA | 3.63 | YES | 1 | 0.85 |
| Wabtec Corp. | WAB | 7.3 | 0.62 | 14,746.41 | NO | WDC | -22 | NO | | 1.35 |
| Walgreens Boots | WBA | 3.63 | 3.37 | 48,015.68 | NO | WEC | 6.1 | YES | 1 | 0.80 |
| Walmart Inc. | WMT | 6.29 | 1.57 | 395,773.75 | NO | WELL | 13 | YES | 1 | 1.00 |
| Waste Management | WM | 11.17 | 1.74 | 55,954.75 | NO | WFC | 112.99 | YES | 1 | 1.20 |
| Waters Corp. | WAT | 7.17 | 0.00 | 18,380.81 | NO | WHR | 3 | YES | 1 | 1.40 |

From S&P website

From IBES downloaded with PCMG proprietary software

| Company Name | Ticker Symbol | Proj EPS Growth Rate | Div'd Yield | Market Cap $ (Mil) | | | | | IBES > VL | Beta |
|---|---|---|---|---|---|---|---|---|---|---|
| WEC Energy Group | WEC | 6.1 | 2.95 | 29,467.84 | NO | WLTW | 5.66 | YES | 1 | 0.90 |
| Wells Fargo | WFC | 112.99 | 1.00 | 165,259.34 | NO | WM | 11.17 | YES | 1 | 0.80 |
| Welltower Inc. | WELL | 13 | 3.30 | 31,388.55 | NO | WMB | 5 | YES | 1 | 1.30 |
| West Pharmac. Svcs. | WST | 22.6 | 0.23 | 21,370.40 | NO | WMT | 6.29 | YES | 1 | 0.55 |
| Western Digital | WDC | -22 | 0.00 | 22,099.32 | NO | WRB | 23.47 | YES | 1 | 1.05 |
| Western Union | WU | 9.25 | 3.56 | 10,385.97 | NO | WRK | 24.38 | YES | 1 | 1.15 |
| WestRock Co. | WRK | 24.38 | 1.51 | 13,899.61 | NO | WST | 22.6 | YES | 1 | 0.85 |
| Weyerhaeuser Co. | WY | 5 | 1.85 | 27,526.19 | NO | WU | 9.25 | YES | 1 | 0.80 |
| Whirlpool Corp. | WHR | 3 | 2.17 | 14,282.94 | NO | WY | 5 | YES | 1 | 1.40 |
| Williams Cos. | WMB | 5 | 6.80 | 29,257.56 | NO | WYNN | -1.1 | NO | | 1.50 |
| Willis Towers Wat. plc | WLTW | 5.66 | 1.19 | 30,671.74 | NO | XEL | 6.3 | YES | 1 | 0.80 |
| Wynn Resorts | WYNN | -1.1 | 0.00 | 14,314.58 | NO | XLNX | 9 | YES | 1 | 0.90 |
| Xcel Energy Inc. | XEL | 6.3 | 2.69 | 36,572.66 | NO | XOM | 10.59 | YES | 1 | 1.15 |
| Xilinx Inc. | XLNX | 9 | 0.00 | 32,288.07 | NO | XRAY | 24.08 | YES | 1 | 1.05 |
| Xylem Inc. | XYL | 18.16 | 1.06 | 19,111.58 | | XYL | 18.16 | YES | 1 | 1.05 |
| Yum! Brands | YUM | 12.61 | 1.75 | 34,215.00 | | YUM | 12.61 | YES | 1 | 1.05 |
| Zebra Techn. 'A' | ZBRA | 10 | 0.00 | 25,945.64 | NO | ZBH | 11.29 | YES | 1 | 1.20 |
| Zimmer Biomet Hldgs. | ZBH | 11.29 | 0.61 | 33,738.07 | NO | ZBRA | 10 | YES | 1 | 1.00 |
| Zions Bancorp. | ZION | -32.4 | 2.45 | 9,115.20 | | ZION | -32.4 | NO | | 1.25 |
| Zoetis Inc. | ZTS | 11.43 | 0.63 | 75,043.21 | | ZTS | 11.43 | YES | 1 | 1.00 |

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**ROE and ROR Analysis NSPM**
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S&P Global
Market Intelligence

**S&P Market Intelligence website, downloaded April 15, 2021**
**In thousands of dollars**

**Average Long-Term Debt for each quarter**

| Company Name | 2020Q4 | 2020Q3 | 2020Q2 | 2020Q1 | 2019Q4 | 2019Q3 | 2019Q2 | 2019Q1 | Average 2019-2020 |
|---|---|---|---|---|---|---|---|---|---|
| Alliant Energy Corporation | 6,678,000 | 6,573,200 | 6,203,150 | 5,690,450 | 5,548,550 | 5,501,600 | 5,415,150 | 5,311,750 | 5,865,231 |
| Ameren Corporation | 10,625,000 | 10,171,500 | 9,774,500 | 9,161,000 | 8,812,500 | 8,465,500 | 8,250,000 | 8,054,500 | 9,164,313 |
| American Electric Power Company, Inc. | 29,350,900 | 28,086,100 | 26,922,750 | 26,314,950 | 25,859,600 | 25,413,650 | 24,607,250 | 22,938,750 | 26,186,744 |
| Consolidated Edison, Inc. | 20,581,500 | 19,988,500 | 20,092,500 | 19,780,000 | 18,846,500 | 18,337,000 | 18,038,500 | 17,627,000 | 19,161,438 |
| CMS Energy Corporation | 13,525,500 | 13,408,500 | 13,048,500 | 12,340,000 | 12,112,000 | 11,761,500 | 11,301,500 | 10,962,000 | 12,307,438 |
| Dominion Energy, Inc. | 33,809,000 | 35,145,500 | 35,880,500 | 34,440,500 | 31,720,000 | 35,540,500 | 37,165,500 | 34,211,500 | 34,739,125 |
| Duke Energy Corporation | 57,196,500 | 57,474,000 | 57,622,500 | 57,071,000 | 56,345,500 | 56,059,000 | 55,506,500 | 53,146,000 | 56,302,625 |
| Entergy Corporation | 20,521,104 | 18,945,511 | 18,253,443 | 17,770,953 | 17,244,524 | 17,307,785 | 17,417,153 | 16,466,544 | 17,990,877 |
| Evergy, Inc. | 9,292,650 | 9,278,800 | 9,137,350 | 8,944,650 | 8,893,400 | 8,079,600 | 7,272,900 | 7,005,050 | 8,488,050 |
| Eversource Energy | 15,479,655 | 14,724,751 | 14,316,689 | 14,388,724 | 14,196,369 | 13,844,197 | 13,279,332 | 12,871,033 | 14,137,594 |
| NextEra Energy, Inc. | 42,701,500 | 42,730,500 | 41,891,500 | 39,606,500 | 37,120,500 | 35,045,500 | 31,915,000 | 28,434,500 | 37,430,688 |
| OGE Energy Corp. | 3,515,300 | 3,493,650 | 3,344,500 | 3,215,200 | 3,238,150 | 3,241,450 | 3,093,750 | 2,921,500 | 3,257,938 |
| Pinnacle West Capital Corporation | 6,675,256 | 6,503,346 | 5,608,152 | 4,884,476 | 4,960,949 | 4,988,676 | 4,939,848 | 4,789,022 | 5,418,716 |
| Portland General Electric Company | 2,919,500 | 2,798,000 | 2,709,500 | 2,693,000 | 2,641,500 | 2,528,500 | 2,382,500 | 2,197,000 | 2,608,688 |
| The Southern Company | 46,917,500 | 46,950,000 | 46,297,000 | 44,629,000 | 43,556,000 | 42,541,500 | 41,780,500 | 41,456,500 | 44,266,000 |
| WEC Energy Group, Inc. | 11,706,500 | 11,187,050 | 10,958,150 | 11,221,350 | 11,092,050 | 10,448,600 | 10,165,750 | 10,182,200 | 10,870,206 |

**ROE and ROR Analysis NSPM**
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**Average Short-Term Debt for each quarter**

| Company Name | 2020Q4 | 2020Q3 | 2020Q2 | 2020Q1 | 2019Q4 | 2019Q3 | 2019Q2 | 2019Q1 | Average 2019-2020 |
|---|---|---|---|---|---|---|---|---|---|
| Alliant Energy Corporation | 418,500 | 310,900 | 410,250 | 816,650 | 1,007,000 | 1,057,850 | 944,750 | 739,950 | 713,231 |
| Ameren Corporation | 563,500 | 553,000 | 724,500 | 930,500 | 888,500 | 1,115,000 | 1,242,000 | 1,159,500 | 897,063 |
| American Electric Power Company, Inc. | 4,704,950 | 4,997,900 | 6,129,400 | 5,768,400 | 4,428,300 | 3,975,550 | 3,749,700 | 3,670,100 | 4,678,038 |
| Consolidated Edison, Inc. | 3,909,500 | 3,873,500 | 3,620,000 | 3,290,500 | 3,238,000 | 3,231,000 | 3,352,000 | 3,365,500 | 3,485,000 |
| CMS Energy Corporation | 1,657,000 | 1,771,500 | 1,732,500 | 1,475,000 | 1,156,000 | 1,085,000 | 984,500 | 987,500 | 1,356,125 |
| Dominion Energy, Inc. | 4,182,000 | 4,331,500 | 4,259,500 | 4,620,500 | 5,333,000 | 6,136,000 | 5,262,000 | 4,792,500 | 4,864,625 |
| Duke Energy Corporation | 7,691,000 | 8,317,500 | 8,325,500 | 7,297,000 | 6,130,500 | 6,240,500 | 6,208,500 | 6,264,500 | 7,059,375 |
| Entergy Corporation | 2,655,325 | 2,799,727 | 3,161,533 | 2,988,831 | 2,653,730 | 2,175,082 | 2,002,789 | 2,375,504 | 2,601,565 |
| Evergy, Inc. | 1,059,000 | 1,050,450 | 1,265,250 | 1,300,850 | 1,131,900 | 1,831,300 | 2,513,650 | 2,133,450 | 1,535,731 |
| Eversource Energy | 1,771,059 | 1,209,783 | 1,237,370 | 1,253,888 | 1,445,341 | 1,591,288 | 1,950,129 | 2,070,355 | 1,566,151 |
| NextEra Energy, Inc. | 5,824,500 | 4,689,500 | 4,983,500 | 5,565,000 | 5,341,500 | 6,706,500 | 9,050,000 | 10,630,000 | 6,598,813 |
| OGE Energy Corp. | 47,500 | 37,500 | 225,000 | 246,600 | 143,500 | 188,150 | 286,950 | 308,200 | 185,425 |
| Pinnacle West Capital Corporation | 195,387 | 261,370 | 800,556 | 1,076,374 | 730,492 | 638,283 | 651,227 | 567,943 | 615,204 |
| Portland General Electric Company | 367,500 | 353,500 | 241,000 | 100,000 | 49,500 | 57,000 | 172,000 | 302,500 | 205,375 |
| The Southern Company | 4,570,500 | 3,900,000 | 3,382,500 | 4,511,000 | 4,678,500 | 4,429,000 | 4,283,000 | 4,952,500 | 4,338,375 |
| WEC Energy Group, Inc. | 1,966,650 | 1,736,850 | 1,814,000 | 1,524,950 | 1,455,900 | 1,708,450 | 1,774,400 | 1,660,200 | 1,705,175 |

**ROE and ROR Analysis NSPM**
**Capital Structure Analysis**

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**Average Preferred Equity for each quarter**

| Company Name | 2020Q4 | 2020Q3 | 2020Q2 | 2020Q1 | 2019Q4 | 2019Q3 | 2019Q2 | 2019Q1 | Average 2019-2020 |
|---|---|---|---|---|---|---|---|---|---|
| Alliant Energy Corporation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ameren Corporation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| American Electric Power Company, Inc. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Consolidated Edison, Inc. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CMS Energy Corporation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dominion Energy, Inc. | 2,387,000 | 2,387,000 | 2,387,000 | 2,387,000 | 1,991,500 | 1,596,000 | 798,000 | 0 | 1,741,688 |
| Duke Energy Corporation | 1,962,000 | 1,962,000 | 1,962,000 | 1,962,000 | 1,962,500 | 1,468,000 | 973,500 | 487,000 | 1,592,375 |
| Entergy Corporation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Evergy, Inc. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Eversource Energy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NextEra Energy, Inc. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OGE Energy Corp. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pinnacle West Capital Corporation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Portland General Electric Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| The Southern Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WEC Energy Group, Inc. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**ROE and ROR Analysis NSPM**
**Capital Structure Analysis**

**Docket No. PU-20-441**
**Attach. ____ (MFG-20) Sch 2**
**CORRECTED**
**Page 4 of 5**

**Average Common Equity for each quarter**

| Company Name | 2020Q4 | 2020Q3 | 2020Q2 | 2020Q1 | 2019Q4 | 2019Q3 | 2019Q2 | 2019Q1 | Average 2019-2020 |
|---|---|---|---|---|---|---|---|---|---|
| Alliant Energy Corporation | 5,698,500 | 5,628,650 | 5,525,350 | 5,353,750 | 5,087,150 | 4,834,400 | 4,691,000 | 4,634,050 | 5,181,606 |
| Ameren Corporation | 8,713,500 | 8,358,000 | 8,156,000 | 8,072,000 | 8,060,500 | 7,926,500 | 7,748,000 | 7,668,000 | 8,087,813 |
| American Electric Power Company, Inc. | 20,458,400 | 20,186,650 | 19,867,900 | 19,680,300 | 19,674,300 | 19,488,000 | 19,227,950 | 19,112,350 | 19,711,981 |
| Consolidated Edison, Inc. | 18,670,500 | 18,359,500 | 18,243,000 | 18,141,500 | 17,990,500 | 17,834,000 | 17,539,000 | 17,047,500 | 17,978,188 |
| CMS Energy Corporation | 5,408,000 | 5,267,000 | 5,199,500 | 5,101,500 | 4,987,500 | 4,904,000 | 4,854,500 | 4,806,500 | 5,066,063 |
| Dominion Energy, Inc. | 23,839,500 | 25,216,500 | 27,411,500 | 28,973,000 | 28,648,500 | 26,895,500 | 26,505,000 | 23,508,000 | 26,374,688 |
| Duke Energy Corporation | 45,023,000 | 43,783,000 | 44,240,500 | 44,909,500 | 44,667,500 | 44,357,500 | 44,148,000 | 43,936,500 | 44,383,188 |
| Entergy Corporation | 10,848,991 | 10,598,914 | 10,324,978 | 10,223,821 | 10,129,368 | 9,916,282 | 9,383,935 | 8,907,336 | 10,041,703 |
| Evergy, Inc. | 8,767,750 | 8,674,950 | 8,538,500 | 8,550,550 | 8,595,600 | 8,751,200 | 9,153,000 | 9,725,550 | 8,844,638 |
| Eversource Energy | 14,021,792 | 13,892,638 | 13,507,607 | 12,919,975 | 12,375,804 | 12,038,104 | 11,796,014 | 11,562,126 | 12,764,257 |
| NextEra Energy, Inc. | 36,900,000 | 37,180,000 | 36,738,000 | 36,704,000 | 36,798,500 | 35,751,000 | 34,568,000 | 34,185,000 | 36,103,063 |
| OGE Energy Corp. | 3,646,250 | 3,612,450 | 3,558,450 | 3,846,100 | 4,162,850 | 4,096,700 | 3,991,700 | 3,990,650 | 3,863,144 |
| Pinnacle West Capital Corporation | 5,737,445 | 5,665,474 | 5,479,490 | 5,450,033 | 5,491,657 | 5,392,872 | 5,242,070 | 5,236,989 | 5,462,004 |
| Portland General Electric Company | 2,604,000 | 2,620,500 | 2,642,000 | 2,614,500 | 2,577,500 | 2,553,000 | 2,545,000 | 2,527,000 | 2,585,438 |
| The Southern Company | 28,130,500 | 27,979,500 | 27,697,500 | 27,615,000 | 27,509,000 | 27,205,500 | 26,667,500 | 25,580,000 | 27,298,063 |
| WEC Energy Group, Inc. | 10,460,200 | 10,417,200 | 10,363,900 | 10,228,750 | 10,082,200 | 10,033,600 | 10,000,350 | 9,886,700 | 10,184,113 |

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**CORRECTED**
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| Company Name | Average Total Capital 2019-2020 | | Long-Term Debt % | Short-Term Debt % | Preferred Equity % | Common Equity % | Total % |
|---|---|---|---|---|---|---|---|
| Alliant Energy Corporation | 11,760,069 | | 49.87% | 6.06% | 0.00% | 44.06% | 100.00% |
| Ameren Corporation | 18,149,188 | | 50.49% | 4.94% | 0.00% | 44.56% | 100.00% |
| American Electric Power Company, Inc. | 50,576,763 | | 51.78% | 9.25% | 0.00% | 38.97% | 100.00% |
| Consolidated Edison, Inc. | 40,624,625 | | 47.17% | 8.58% | 0.00% | 44.25% | 100.00% |
| CMS Energy Corporation | 18,729,625 | | 65.71% | 7.24% | 0.00% | 27.05% | 100.00% |
| Dominion Energy, Inc. | 67,720,125 | | 51.30% | 7.18% | 2.57% | 38.95% | 100.00% |
| Duke Energy Corporation | 109,337,563 | | 51.49% | 6.46% | 1.46% | 40.59% | 100.00% |
| Entergy Corporation | 30,634,145 | | 58.73% | 8.49% | 0.00% | 32.78% | 100.00% |
| Evergy, Inc. | 18,868,419 | | 44.99% | 8.14% | 0.00% | 46.88% | 100.00% |
| Eversource Energy | 28,468,002 | | 49.66% | 5.50% | 0.00% | 44.84% | 100.00% |
| NextEra Energy, Inc. | 80,132,563 | | 46.71% | 8.23% | 0.00% | 45.05% | 100.00% |
| OGE Energy Corp. | 7,306,506 | | 44.59% | 2.54% | 0.00% | 52.87% | 100.00% |
| Pinnacle West Capital Corporation | 11,495,923 | | 47.14% | 5.35% | 0.00% | 47.51% | 100.00% |
| Portland General Electric Company | 5,399,500 | | 48.31% | 3.80% | 0.00% | 47.88% | 100.00% |
| The Southern Company | 75,902,438 | | 58.32% | 5.72% | 0.00% | 35.96% | 100.00% |
| WEC Energy Group, Inc. | 22,759,494 | | 47.76% | 7.49% | 0.00% | 44.75% | 100.00% |
| | | Average % | 50.88% | 6.56% | 0.25% | 42.31% | 100.00% |
| | | Excluding CMS, Entergy, | 48.56% | 6.43% | 0.31% | 44.71% | 100.00% |
| | | Also excluding AEP, | 48.02% | 6.10% | 0.13% | 45.75% | 100.00% |

**Q. WHY DID YOU SELECT THESE EIGHT QUARTERS FOR YOUR CAPITAL-STRUCTURE ANALYSIS?**

A. I used two years of data to smooth the effects of any quarter that was an outlier. Using two years of data also mitigated any seasonal effects on the capital structures. The fourth quarter of 2020 is the most recent quarter for which data were available. Therefore, I began my analysis with data from the first quarter of 2019.

**Q. DID YOU MAKE ANY ADJUSTMENTS IN YOUR CAPITAL-STRUCTURE ANALYSIS?**

A. Yes. I first excluded the results for CMS Energy, Entergy, and Southern Co. These companies have long-term debt ratios that exceed 55 percent. Commissions rarely have approved capital structures with such lopsided, high ratios, so I chose to exclude the companies' capital structures from my analysis.

**Q. PLEASE STATE THE AVERAGE CAPITAL-STRUCTURE RATIOS FOUND AT THIS POINT IN YOUR ANALYSIS.**

A. My calculations produced average ratios of 48.56 percent long-term debt, 6.43 percent short-term debt, 0.31 percent preferred equity, and 44.71 percent common equity.

**Q. DID YOU STOP THERE?**

A. No. I continued my analysis, removing American Electric Power and Dominion Energy from the calculations. These companies had common-equity ratios less than 40 percent, which are unreasonably low. This adjustment produced average ratios of 48.02 percent long-term debt, 6.10 percent short-term debt, 0.13 percent preferred equity, and 45.75 percent common equity.

**Q. WHAT WAS YOUR RECOMMENDED CAPITAL-STRUCTURE RATIOS FOR NSPM?**

A. My recommended capital-structure ratios were 50.00 percent long-term debt, 0.50 percent short-term debt, and 49.50 percent common equity.[1] These recommended ratios reflect the ratios I found in my analysis for the Comparison Group and the Company's requested ratios. I adopted 0.50 percent for short-term debt as it is close to NSPM's requested ratio. I increased the long-term debt ratio to 50 percent because that value is close to both the Company's request and the average for the proxy group companies. Those assumptions left 49.50 percent for common equity. The Company's requested 52.50 percent common equity was significantly greater than the 45.75 percent ratio I found for the Comparison Group adjusted for extreme values. Therefore, I recommended reducing the ratio from 52.50 percent to fit better with the mean ratio for the peer companies.

**Q. WHAT IS THE OVERALL ROR THAT YOU RECOMMENDED FOR THE COMPANY?**

A. When my estimated ROE of 9.50 percent was included with the proposed capital structure and the Company's costs for the other capital-structure elements, the ROR is 6.818 percent.[2]

[1] NSPM does not have preferred equity, so I removed it from my recommendation. The average ratio for the Comparison Group companies in the analysis is quite small. Further, the great majority of the electric utilities did not have preferred equity in their capital structures.
[2] Attachment ____ (MFG-20), Schedule 3.

INFRASTRUCTURE AND PROJECT FINANCE

MOODY'S
INVESTORS SERVICE

CREDIT OPINION
31 December 2020

Update

Rate this Research

**RATINGS**

**Northern States Power Company (Minnesota)**

| | |
|---|---|
| Domicile | Minneapolis, Minnesota, United States |
| Long Term Rating | A2 |
| Type | LT Issuer Rating |
| Outlook | Stable |

*Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.*

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# Northern States Power Company (Minnesota)

## Update to credit analysis

### Summary

The credit profile of Northern States Power Company (Minnesota) (NSP-Minnesota) reflects the fully regulated nature of its vertically integrated electric and natural gas distribution operations in Minnesota (nearly 90% of its rate base), North and South Dakota (each accounts for less than 10% of its rate base). The profile reflects our view that these regulatory environments are generally credit supportive, particularly in Minnesota where it benefits from several riders as well as annual sales true-ups.

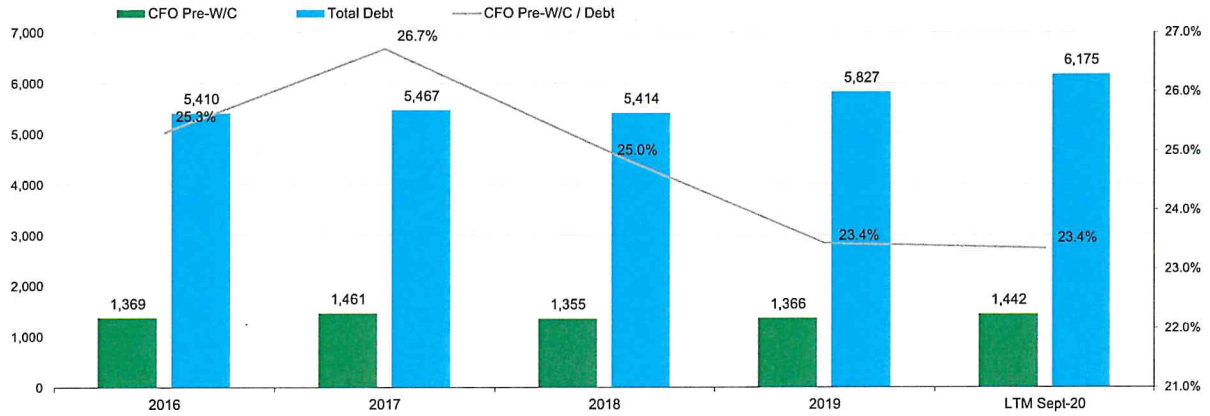
The credit assumes that the utility will continue to produce a ratio of cash flow from operations excluding changes in working capital (CFO pre-W/C) to debt at or above 22% following the Minnesota Public Utility's Commission (MPUC) recent approval of the utility's extension to its stay-out period, through 2021.

NSP-Minnesota ranks as one of the larger subsidiaries in the Xcel Energy Inc. (Xcel, Baa1 stable) family in terms of rate base (2019 estimated: 37%) as well as earnings before interest, taxes, depreciation and amortization (EBITDA) and cash flow contribution (40%-45%). The credit profile also recognizes that NSP-Minnesota's state regulators indirectly restrict dividends that the utility is allowed to upstream to parent Xcel by requiring NSP-Minnesota to maintain an equity-to-total capitalization ratio ranging between 47.1% to 57.5%.

### Recent Developments

**Coronavirus -** The rapid spread of the coronavirus outbreak, severe global economic shock, low oil prices, and asset price volatility are creating a severe and extensive credit shock across many sectors, regions and markets. The combined credit effects of these developments are unprecedented. We regard the coronavirus outbreak as a social risk under our ESG framework, given the substantial implications for public health and safety. However, we expect the NSP-Minnesota to be relatively resilient to recessionary pressures because of its rate regulated business model and regulatory mechanisms.

Exhibit 1
**Historical CFO Pre-W/C, Total Debt and CFO Pre-W/C to Debt ($ MM)**




*Source: Moody's Financial Metrics*

## Credit strengths

» Vertically integrated regulated utility operations in overall credit supportive regulatory environments

» Numerous riders and trackers that reduce regulatory lag

» Dividend distributions are subject to the commissions' indirectly imposed restrictions regarding capital structure

## Credit challenges

» Some uncertainty around the utility's capex pending the approval of the Minnesota Relief and Recovery

» Credit metrics are lower than historical highs, but remain supportive of credit quality.

## Rating outlook

NSP-Minnesota's stable outlook is supported by the predictable nature of the utility's operations and the expectation that the regulatory environments will remain credit supportive. The stable outlook assumes that although lower than previous highs, its key credit metrics will remain adequate for its credit, including CFO pre-W/C to debt of at least 22%. The outlook considers Xcel's group-wide O&M-cost control initiatives, overall timely recovery of costs, as well as some moderation in the utility's base case capex.

## Factors that could lead to an upgrade

» While not expected in the near term, the utility's ratings could experience positive momentum if greater than anticipated regulatory relief or cost savings, or a reduction in leverage, allow it to record CFO pre-W/C to debt in the high 20% range.

## Factors that could lead to a downgrade

» The ratings could be downgraded if we perceive a deterioration in the credit supportiveness of its regulatory environments, or if its credit metrics deteriorate further; specifically, downward pressure on the ratings could result if its CFO pre-W/C to debt ratio falls below 22%, for an extended period.

## Key indicators

Exhibit 2
**Northern States Power Company - Minnesota**

| | Dec-16 | Dec-17 | Dec-18 | Dec-19 | LTM Sept-20 |
|---|---|---|---|---|---|
| CFO Pre-W/C + Interest / Interest | 6.7x | 7.0x | 6.6x | 6.7x | 6.7x |
| CFO Pre-W/C / Debt | 25.3% | 26.7% | 25.0% | 23.4% | 23.4% |
| CFO Pre-W/C – Dividends / Debt | 18.0% | 17.5% | 16.6% | 15.4% | 15.4% |
| Debt / Capitalization | 40.3% | 44.0% | 43.0% | 42.9% | 43.0% |

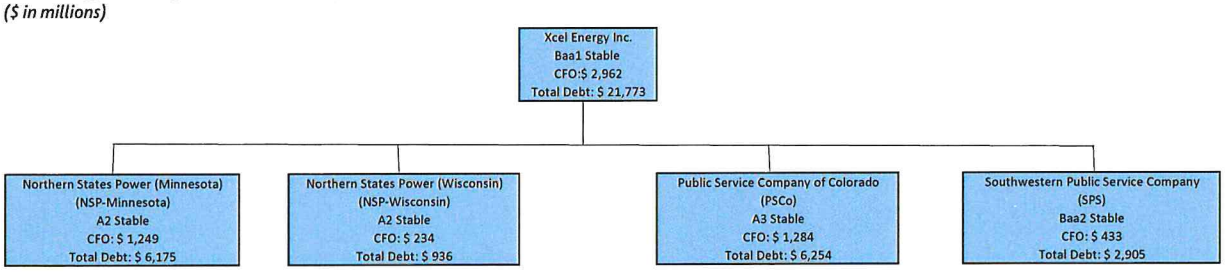
[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
*Source: Moody's Financial Metrics*

## Profile

NSP-Minnesota is a vertically integrated utility that provides electric services to 1.5 million customers in Minnesota, North Dakota and South Dakota as well as natural gas services to 0.5 million customers in Minnesota and North Dakota. Minnesota, mostly around Minneapolis-St. Paul, accounts for the bulk of its operations (almost 90% of revenues).

As depicted in Exhibit 3, NSP-Minnesota is the legacy subsidiary of parent Xcel Energy Inc. (Xcel, Baa1 stable), a holding company with utility operations in eight states servicing around 3.7 million electric customers and about 2.1 million natural gas customers. NSP-Minnesota is the second largest subsidiary in terms of regulated rate base (2019 year-end estimate: $11.3 billion) after Public Service Company of Colorado (PSCO, A3 stable; 2019 year-end estimate: 12.4 billion) with each contributing between 35-45% to Xcel's consolidated net income. NSP-Minnesota and its smaller neighboring sister company Northern States Power (Wisconsin) (NSP-Wisconsin, A2 stable) operate their electric production and transmission systems as an integrated system known as the NSP-System. They share the costs of operating their integrated production and transmission systems (NSP-System) according to a Federal Energy Regulatory Commission (FERC) approved Interchange Agreement (IA).

Exhibit 3
**Xcel Energy Inc. Organizational Chart (LTM 3Q2020)**
***($ in millions)***




*Source: Xcel Energy Inc., Moody's Financial Metrics*

## Detailed credit considerations

### Limited diversification benefits; bulk of operations are in Minnesota

NSP-Minnesota's credit quality reflects limited geographic diversification benefits because Minnesota accounts for the majority of its operations while North and South Dakota (electric only) each represent around 6% of the total. At the same time, the Federal Energy Regulatory Commission's (FERC) oversight of NSP-Minnesota's wholesale production (nearly 5% of the utility's 2019 total electric revenues) and transmission services modestly enhances its regulatory diversity.

### Overall credit supportive regulatory environments

**Riders and surcharges reduce regulatory lag**

Our view of the credit supportiveness of the regulatory frameworks in the states in which NSP-Minnesota operates considers that the utility's cash flows benefit from a broad group of rider mechanisms that allow for the timely recovery of costs and investments between rate cases and the ability to implement multi-year rate plans in all three states. The utility also benefits from the ability to

implement interim rates until final tariff decisions are made, automatic fuel and purchase power cost recovery mechanisms (subject to monthly adjustments) and transmission riders. These mechanisms reduce the exposure of the utility's cash flows to the impact of regulatory lag as the utility stayed out of rate cases in recent years.

Exhibit 4
**Summary of key regulatory mechanisms available in NSP-Minnesota's jurisdictions**

| | Multi-year Rate Plans | Forward Test Year | Interim Rates | Fuel Recovery Mechanism | Renewable Rider | Transmission Rider | Distribution Recovery Mechanism | Infrastructure Rider | Pension Deferral Mechanism | Property Tax Deferral/True-up | Decoupling |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **NSP-M** | √ | √ MN & ND | √ | √ | √ MN & ND | √ MN & ND | √ MN | √ SD | √ MN | √ MN | √ MN |

*Source: Xcel Energy Inc., regulatory filings*

However, the number of automatic recovery mechanisms is more extensive in Minnesota (including distribution and decoupling), followed by North Dakota. This drives our view that these regulatory frameworks are above-average in terms of credit supportiveness compared to most other states, including South Dakota. In South Dakota, rates are based on historical test periods which, along with a limited number of riders, have contributed to the utility's volatile actual return on equities (RoEs) (see Exhibit 5).

Exhibit 5
**Summary of key financial parameters including authorized and actual RoEs and applicable regulatory plans**

| | | Authorized RoE | W/A Earned RoE (actual) | | | Regulatory Plan |
|---|---|---|---|---|---|---|
| | | | 2017 | 2018 | 2019 | |
| **NSP-Minnesota** | Electric-Mn | 9.20% | 9.66% | 8.88% | 9.31% | Stay-out through 2021 verbally approved by the MPCU |
| | NG-Mn | 10.09% | 9.16% | 9.81% | 8.54% | |
| | Electric - ND | 9.85% | 10.91% | 9.93% | 9.86% | Filed Rate Case in 2020 |
| | NG-ND | 9.75% | 8.75% | 10.32% | 3.74% | TCJA Settlement 2019-20 |
| | Electric - SD | Blackbox | 6.91% | 6.79% | 8.77% | TCJA Settlement 2019-20 |

*Source: Xcel Energy Inc., Regulatory filings*

### Overall credit constructive regulatory proceedings

**In Minnesota**, NSP-Minnesota benefits from a decoupling mechanisms (implemented in January 2016) for electric residential end-users, as well as small commercial and industrial (C&I) customers, although their annual increases are capped at 3%. In addition, revenues from all non-decoupled electric customers are also subject to sales true-ups. These mechanism is credit supportive because it enhances the visibility of the utility's cash flows, particularly in the aftermath of the economic disruption caused by the coronavirus pandemic. Next year, the utility's rates will be adjusted to reflect both, this year's material increase in the residential customers power demand as well as the significant reduction in the C&I customers' demand. During the nine month period ended September 2020, NSP-Minnesota reported a reduction in total retail sales of nearly 3.4% (weather-adjusted: -4.2%). The increase in residential power demand (actual: +5.6%) could not fully offset the 3.4% contraction in sales to its C&I customer-class (on a weather adjusted basis: -7.5%).

This sales true-up, along with capital and property tax true-up mechanisms, were implemented as part of the utility's 2016-2019 rate plan that expired last year. These mechanisms will remain in place for at least another year following the MPUC's authorization (verbal approval in December 2020) of NSP-Minnesota's proposed stay out provision in December 2020. The extension of the mechanisms is credit positive because it reduces the utility's exposure to regulatory lag. Similar to last year, the utility also withdrew the rate case (filed in November 2020) requesting a rate increase that totaled $597 million for the 2021-2023 period. In its 2020 stay-out petition, the utility also requested authority to delay any increase to the nuclear decommissioning trust annual accrual until January 1, 2022. On a less positive note, the utility also agreed to implement an earnings sharing mechanism. According to the agreement, NSP-Minnesota will refund to customers all earnings above a RoE of 9.06% in 2021, which is consistent with the last RoE approved in a rider request, but below the 9.2% RoE authorized in its last rate case (Order in June 2017).

However, we acknowledge that this earnings test, along with the utility's agreement not to seek rate relief for incremental bad debt expenses in the aftermath of the coronavirus pandemic, and its agreement to fund $17.5 million in customer relief programs should help the utility manage its relationship with its stakeholders, a credit positive. Utilities in Minnesota are currently subject to the annual winter moratorium of shutting off residential customer service for non-payment (until April 15) which overlapped with this year's disconnection bans put in place at the onset of the pandemic. However, we believe that the impact on the utility's cash flows of foregoing this rate relief (bad debt expenses) and payment assistance will not be significant. Xcel's management recently disclosed that it estimates that the group's consolidated bad debt expenses (2019: around $55 million) will rise by around $25 million during 2020 which equals to an increase by around 50%. For NSP-Minnesota, a similar increase would result in a step-up of its reported allowance for doubtful accounts (AFDA) to around $34.5 million (year-end 2019: $23 million). However, similar to other US utilities, NSP-Minnesota's base rates include recovery of its historical write-offs, that is the annual amounts which were deemed ultimately uncollectible. This amount reduces the cash impact of its bad debt expense. As a point of reference, the utility's write-offs averaged $12.6 million or less than 1% of its reported funds from operations during the 2015-2019 period.

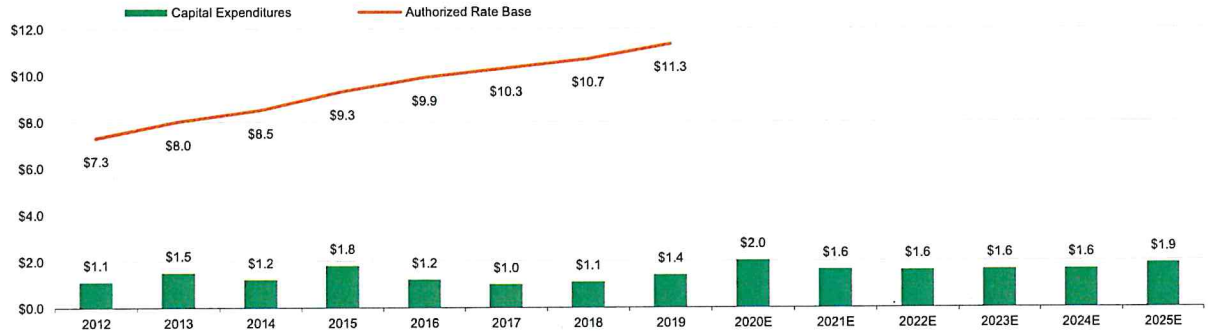
**In North and South Dakota**, in November 2020, NSP-Minnesota requested the North Dakota Public Service Commission's (NDPSC) authorization to increase its retail electric revenues by $22 million (+10.8%). It is premised on a rate base of $677 million for the 2021 test year as well as increase in its authorized RoE to 10.2% (+34 basis points) and an equity layer of 52 .5%. The utility also requested authorization to implement an interim rate increase of about $16 million in January 2021. This is the first rate case filed by the utility in ND following the expiration of the two-year rate freeze that the utility agreed to (also in South Dakota) in exchange for authority to retain the amounts due to the electric customers in 2018 and 2019 in connection to the implementation of the 2017 Tax Cuts and Jobs Act (TCJA). NSP-Minnesota was authorized to use the refundable amounts due to natural gas customers to amortize the regulatory assets related to unrecovered manufactured gas plant site expenses in Fargo. The outcome of NSP-Minnesota's ongoing rate case will be an important indication of both the utility's relationship with the NDPUC and the credit supportiveness of the ND regulatory environment. North Dakota remains one of the few jurisdictions where the regulator has not made a decision yet as to whether authorize the utilities' request to apply deferral accounting treatment to incremental costs related to the coronavirus pandemic, and record them under regulatory assets and liabilities.

**FERC -** NSP-Minnesota's credit also benefits from the predictable cash flow associated with its FERC regulated transmission operations. Our view of the credit supportiveness of the FERC regulatory environment recognizes that tariffs are set on a forward-looking basis utilizing formulaic rate recovery mechanisms and true-ups (including for sales), as well as robust (60%) equity layers. NSP-Minnesota, similar to other Midcontinent Independent System Operator (MISO) transmission owners, has been involved in two Federal Power Act (FPA) Section 206 complaints filed at the FERC by customers and public groups. The complaints questioned the justness and reasonableness of the base ROE for MISO transmission owners. In May 2020, following a request to rehear its November 2019 order, the FERC issued a final resolution of a pending 206 complaint (first complaint) disputing the justness and reasonableness of the base RoE for MISO transmission owners, including NSP-Minnesota. Following additional revisions to the base RoE methodology, the May Order increased the base RoE to 10.02% (November 2019 order: 9.88%), effective as of the end of September 2016, which includes the continuation of a 0.5% RoE incentive adder. The transmission utilities are required to provide refunds, with interest, for the 15-month refund period from November 12, 2013 through February 11, 2015 and for the period from September 28, 2016 through May 21, 2020. We understand the impact of the refunds on NSP-Minnesota' cash flows is not significant. According to the May Order, the second 206 complaint (filed in February 2015) covering a statutory refund period from February 2015 to May 2016 remains dismissed.

### Some uncertainty around apex program, but likely to remain moderate

Xcel has disclosed that NSP-Minnesota's capital expenditures (capex) program for the 2021-2025 period will aggregate $8.4 billion with annual investments averaging around $1.7 billion. The utility has earmarked the bulk of the investments (nearly 75%) to expand its electric transmission, distribution and generation footprint. According to this plan, the completion next year of the 300 MW Dakota Range wind project (COD: 2021) will complete its currently planned investments in renewables (capex in 2021:$295 million; afterwards: $0). Between 2019 and 2021, NSP-Minnesota will have completed five wind projects and acquired two wind farms, increasing its wind-farm capacity to nearly 2.2 GW from 840 MW at year-end 2018 (see ESG Section). These investments exceed the company's historical annual capital outlays (around $6.8 billion for the 2016-2020 period, or about $1.3 billion annually).

Exhibit 6
**NSP-Minnesota's rate base and 2012-2025 historical and projected capital expenditure plan**
**($ in billions)**




These planned expenditures exclude investments related to the Minnesota Relief and Recovery proposal.
*Source: Xcel Energy Inc.*

However, pending the MPCU's approval of its Minnesota Relief and Recovery (R&R) proposal, NSP-Minnesota's investments in renewables could increase by around $1.3 billion (+16%) while it would also accelerate its planned investments in the grid ($865 million). This proposal followed the MPUC's 2020 invitation to submit projects to create jobs and aid the economy in the aftermath of the pandemic outbreak. NSP-Minnesota's proposal includes the repowering of 651 MW of owned wind-projects (total capex: $750 million) as well as the construction of 460MW in solar projects (incremental capex: $650 million). In December 2020, the MPUC approved the utility's wind repowering proposal. NSP-Minnestoa requested a decision regarding the solar assets before the end of June 2021. We estimate that, including these incremental annual investments, the utility's ratio of capex to depreciation during the 2021-2025 period would still remain below 2.0x (average ratio during the 2016-last twelve month period ended September 2020: 1.7x),

We understand that, if these new renewable projects are approved and developed, NSP-Minnesota would undertake the investments but share the costs with NSP-Wisconsin through the aforementioned Interchange Agreement (IA). NSP-Minnesota operates the NSP-System while NSP-Wisconsin is responsible for around 15% of the demand related costs. Generally, the associated interchange revenues received from NSP-Wisconsin represent around 10% of NSP-Minnesota's total revenues.

## Credit metrics have declined from historic highs but expected to remain supportive of credit quality

As depicted under Exhibits 1 and 2, NSP-Minnesota's credit metrics were historically very well positioned for the credit profile, including CFO pre-W/C to debt that consistently exceeded 25% during the 2015-2018 period. However, the ratio dropped to 23.4% last year largely due to the cash leakage that resulted from the implementation of the TCJA, particularly the combination of the expiration of bonus depreciation and the MPUC's order to refund $141 million to its electric and natural gas customers following the reevaluation of the accumulated deferred income tax (ADIT) at the lower corporate tax rate of 21%.

That said, we note that the ratio remained stable at 23.4% for the last twelve month period ended September 2020 while it also reported a RoE of 9.53% (GAAP) during the same period despite the economic disruption caused by the pandemic. The utility's financial ratios were aided by the aforementioned automatic recovery mechanisms and additional cost savings. During the nine month period ended September 2020, the utility reported a reduction in its operational and maintenance expenses by $20.2million (-4.5%) compared to the same period in 2019 (during financial year 2019 compared to 2018:- 1.7%). During 2020, these initiatives are largely related to lower plant generation expenses (including timing of planned maintenance and overhauls).

Going forward, we assume that automatic recovery mechanisms and additional cost savings will allow the utility to record financial metrics that will remain adequate for the credit profile. This expectation includes a ratio of CFO pre-W/C to debt of at or above 22% over the foreseeable future even if the aforementioned incremental investments associated with the Minnesota R&R program (+$1.3 billion) are approved. NSP-Minnesota's dividend distributions is subject to the utility recording an equity-to-total capitalization ratio that ranges between 47.1% and 57.1% (2010: 52.3%).

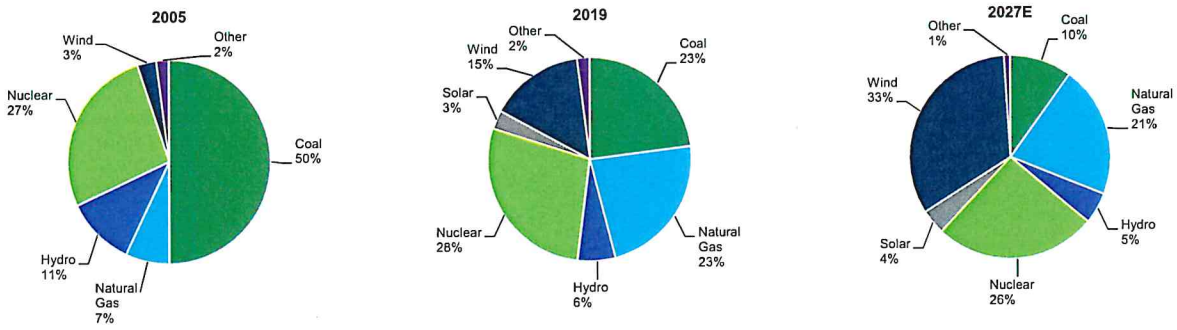
## ESG considerations

Environmental considerations incorporated into our analysis of NSP-Minnesota are primarily related to carbon dioxide regulations as well as the natural gas distribution operations' clean-up expenses related to manufactured gas plants (MGP) and also methane emissions. NSP-Minnestoa's parent, Xcel, is strongly positioned for carbon transition in the regulated utility sector with strategies and plans in place that substantially mitigate its carbon transition exposure.

Environmental considerations incorporated into our credit analysis of NSP-Minnesota factors in Xcel's goal of producing 100% carbon free energy by 2050. It also considers that NSP-Minnesota aims to reduce, by 2030, carbon dioxide emissions to 80% below 2005 levels. However, this goal is pending the approval of its Resource Plan that was initially filed in July 2019 with a supplement filed in June 2020. Xcel expects during 2021.

The NSP System generates the bulk of the power requirements of NSP-Minnesota with a portion procured under Power Purchase Agreements. NSP-Minnesota's goals incorporate the output from its nuclear fleet (1,657 MW) as the utility's Resource Plan seeks to extend the life of the Monticello nuclear plant to 2040 from 2030 and to maintain operations at the Prairie Island nuclear units until 2033 and 2034 (the end of their lives). Exhibit 5 illustrates the growing contribution of renewables following the addition of the aforementioned wind-farms to the energy-mix (installed capacity: 2.2 GW; 2018: 840 MW). It also depicts Xcel's expectation that the approved retirement of NSP-Minnesota's 1,362 MW Sherco Unit 2 (2023) and Unit 1 (2026) will reduce the contribution of coal-fired facility output to the energy mix of NSP-Wisconsin and NSP-Minnesota to around 10% in 2027 (2019: 23%).

Exhibit 7
**2005-2027 planned development of NSP-Minnesota's energy mix**




*Source: Xcel Energy Inc.*

However, the contribution from coal could drop to 0% if the MPUC approves NSP Minnesota's Resource Plan for the period ending 2034. The utility also proposed the retirement of the 511 MW King facility and the 517 MW Sherco Unit 3 by 2030. We assume that, upon their retirement, the utility will be able to recover the remaining rate base of its coal-fired facilities (all more than 35 years old). We assume that this rate base is relatively small, and largely reflects environmental compliance investments.

The Resource Plan also includes the construction of the Sherco combined cycle natural gas plant (CCGT; peak investment in 2026; CoD: 2028). The plan also includes demand side Management (DSM) initiatives such as energy efficiency programs (annual savings through 2034 around 780 GWh), and 400 MW of incremental demand response by 2023 (total by 2034: over 1,500 MW). The utility has also proposed the addition of around 2,600 MW of firm peaking resources (including combustion turbine battery storage and pumped hydro) between 2031 and 2034, as well solar (3,500 MW) and wind (2,200 MW) assets. These additions will also replace wind assets that are expected to retire during that period.

The completion of the majority of NSP-Minnesota's aforementioned wind projects before year-end 2020 allow them to quality for 100% of Production Tax Credits (PTCs) while the 300 MW Dakota Range (COD: 2021) is expected to quality for 80% of PTCs. The

flow back to customers of the tax benefits, along with the saved fuel costs, and the termination of PPAs (that are subject to elevated contracted prices), along with the group-wide focus on reducing O&M-expenses and credit back to customers of the tax credits (PTCs and ITCs) are key elements of the group-wide's strategy to limit the impact of the utilities' material investment on the customers' bills. As per the Resource Plan, NSP-Minnesota's goal is to keep the annual cost increases below the rate of inflation.

Social risks are primarily related to demographic and societal trends as well as customer and regulatory relations. Corporate governance considerations include financial policy and we note that a strong financial position is an important characteristic for managing environmental and social risks amid the group's significant capital expenditure program.

## Liquidity analysis

Similar to its sister companies, NSP-Minnesota has its own separate committed credit facility. Following the group's amendment of the facilities, in June 2019, they are now scheduled to mature in June 2024. This facility back-stops the utility's same-sized $500 million CP-program (Prime-1). At the end of September 2020, the utility had $490 million available under this credit facility (letter of credits outstanding: $10 million) as well as $422.8 million of cash on hand. The facility provides for same day funding and borrowings are not subject to conditionality, including any MAC clause. We anticipate the utility will be able to continue to comfortably comply with the only financial covenant embedded in the facility, namely a total Debt/Capitalization ratio below 65%. As of September 2020, the ratio was 47.5% (2019: 48%). Furthermore, in March 2020, NSP-Minnesota renewed the $75 million one-year uncommitted bilateral credit agreement for an additional one-year term, which is used to support letters of credit (available at the end of September 2020: $29 million).

NSP-Minnesota also participates in a regulated money pool with its sister companies (since October 2020, including NSP-Wisconsin). As of 30 September 2020, NSP-Minnesota's $250 million borrowing limit was fully available. This money pool allows for short-term loans among those utility subsidiaries and allows for short-term loans from Xcel to the utilities. However, it does not permit loans from the utilities to Xcel. NPS-Minnesota's next debt maturity consists of $300 million first mortgage bonds (FMB) due in August 2022.

Xcel has publicly disclosed that NSP-Minnesota will issue $400 million first mortgage bonds in 2021 following the 2.60% $700 million FMB issuance completed in September 2020 (maturity: June 2051). We anticipate that the utility will fund its capital requirements in 2021, including investments (in 2021:$1.6 billion), largely with internally generated cash flows (as a point of reference, LTM September 2020: nearly $1.2 billion) and short and long-term debt financing. We also anticipate that Xcel will continue to manage NSP-Minnesota's dividend policy (LTM September 2020: $493 million) and equity contributions to the utility (LTM September 202: $423 million) so as to meet its regulatory capital structure (that is a aforementioned range of equity-to-total capitalization ratio). In January 2020, Xcel contributed $150 million across the four pension plans (NSP-Minnesota's contribution: $44 million; 2019: $47 million).

## Rating methodology and scorecard factors

Moody's evaluates NSP-Minnesota's financial performance relative to the Regulated Electric and Gas Utilities rating methodology published in June 2017. As depicted in the grid below, the company's scorecard-indicated outcome based on historical as well as projected average key credit metrics is A2, the same as its assigned senior unsecured rating.

Exhibit 8
**Northern States Power Company (Minnesota)**

| Regulated Electric and Gas Utilities Industry [1][2] | Current LTM 9/30/2020 | | Moody's 12-18 Month Forward View As of Date Published [3] | |
|---|---|---|---|---|
| **Factor 1 : Regulatory Framework (25%)** | **Measure** | **Score** | **Measure** | **Score** |
| a) Legislative and Judicial Underpinnings of the Regulatory Framework | A | A | A | A |
| b) Consistency and Predictability of Regulation | A | A | A | A |
| **Factor 2 : Ability to Recover Costs and Earn Returns (25%)** | | | | |
| a) Timeliness of Recovery of Operating and Capital Costs | Aa | Aa | Aa | Aa |
| b) Sufficiency of Rates and Returns | Baa | Baa | Baa | Baa |
| **Factor 3 : Diversification (10%)** | | | | |
| a) Market Position | A | A | A | A |
| b) Generation and Fuel Diversity | Baa | Baa | Baa | Baa |
| **Factor 4 : Financial Strength (40%)** | | | | |
| a) CFO pre-WC + Interest / Interest (3 Year Avg) | 6.9x | Aa | 6x - 7x | Aa |
| b) CFO pre-WC / Debt (3 Year Avg) | 24.6% | A | 22% - 24% | A |
| c) CFO pre-WC – Dividends / Debt (3 Year Avg) | 17.1% | A | 16% - 18% | A |
| d) Debt / Capitalization (3 Year Avg) | 43.1% | A | 40% - 42% | A |
| **Rating:** | | | | |
| Scorecard-Indicated Outcome Before Notching Adjustment | | A2 | | A2 |
| HoldCo Structural Subordination Notching | 0 | 0 | 0 | 0 |
| a) Scorecard-Indicated Outcome | | A2 | | A2 |
| b) Actual Rating Assigned | | A2 | | A2 |

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
[2] As of 9/30/2020(L)
[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.
[4] Standard risk grid for financial strength.
*Source: Moody's Financial Metrics*

## Appendix

Exhibit 9
**Peer Comparison [1]**

| | Northern States Power Company (P)A2 (Stable) | | | Northern States Power Company (P)A2 (Stable) | | | ALLETE, Inc. Baa1 (Stable) | | | Otter Tail Power Company A3 (Stable) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (In US millions) | FYE Dec-18 | FYE Dec-19 | LTM Sept-20 | FYE Dec-18 | FYE Dec-19 | LTM Sept-20 | FYE Dec-18 | FYE Dec-19 | LTM Sept-20 | FYE Dec-19 | FYE Dec-19 | LTM Sept-20 |
| Revenue | 5,122 | 5,112 | 5,050 | 1,022 | 981 | 958 | 1,499 | 1,241 | 1,153 | 450 | 459 | 448 |
| CFO Pre-W/C | 1,355 | 1,366 | 1,442 | 213 | 230 | 228 | 387 | 335 | 328 | 111 | 142 | 156 |
| Total Debt | 5,414 | 5,827 | 6,175 | 908 | 903 | 936 | 1,703 | 1,806 | 2,201 | 600 | 686 | 760 |
| CFO Pre-W/C + Interest / Interest | 6.6x | 6.7x | 6.7x | 6.2x | 6.9x | 6.9x | 6.0x | 5.7x | 5.7x | 4.7x | 5.6x | 5.7x |
| CFO Pre-W/C / Debt | 25.0% | 23.4% | 23.4% | 23.5% | 25.4% | 24.3% | 22.7% | 18.6% | 14.9% | 18.6% | 20.7% | 20.5% |
| CFO Pre-W/C – Dividends / Debt | 16.6% | 15.4% | 15.4% | 13.4% | 16.1% | 17.5% | 16.0% | 11.9% | 9.2% | 11.5% | 14.3% | 14.6% |
| Debt / Capitalization | 43.0% | 42.9% | 43.0% | 42.9% | 41.9% | 41.3% | 41.8% | 41.6% | 45.5% | 46.0% | 47.3% | 45.6% |

*Source: Moody's Financial Metrics*

Exhibit 10
**Cash flow and credit metrics [1]**

| CF Metrics | Dec-16 | Dec-17 | Dec-18 | Dec-19 | LTM Sept-20 |
|---|---|---|---|---|---|
| As Adjusted | | | | | |
| FFO | 1,395 | 1,485 | 1,419 | 1,420 | 1,487 |
| +/- Other | -26 | -24 | -65 | -55 | -45 |
| CFO Pre-WC | 1,369 | 1,461 | 1,355 | 1,366 | 1,442 |
| +/- ΔWC | -42 | -158 | 159 | -183 | -193 |
| WC | 1,327 | 1,302 | 1,514 | 1,183 | 1,249 |
| WC | 1,369 | 1,461 | 1,355 | 1,366 | 1,442 |
| CFO | 1,327 | 1,302 | 1,514 | 1,183 | 1,249 |
| - Div | 396 | 507 | 456 | 467 | 493 |
| - Capex | 1,178 | 984 | 1,146 | 1,410 | 1,353 |
| FCF | -247 | -188 | -89 | -693 | -597 |
| | | | | | |
| (CFO Pre-W/C) / Debt | 25.3% | 26.7% | 25.0% | 23.4% | 23.4% |
| (CFO Pre-W/C - Dividends) / Debt | 18.0% | 17.5% | 16.6% | 15.4% | 15.4% |
| FFO / Debt | 25.8% | 27.2% | 26.2% | 24.4% | 24.1% |
| RCF / Debt | 18.5% | 17.9% | 17.8% | 16.4% | 16.1% |
| | | | | | |
| Revenue | 4,900 | 5,102 | 5,122 | 5,112 | 5,050 |
| Interest Expense | 240 | 242 | 240 | 242 | 253 |
| Net Income | 490 | 523 | 476 | 539 | 591 |
| Total Assets | 17,917 | 18,005 | 18,525 | 19,904 | 21,144 |
| Total Liabilities | 12,691 | 12,664 | 13,024 | 13,911 | 14,726 |
| Total Equity | 5,226 | 5,341 | 5,500 | 5,993 | 6,418 |

[1] All figures & ratios calculated using Moody's estimates & standard adjustments. FYE = Financial Year-End. LTM = Last Twelve Months.
*Source: Moody's Financial Metrics*

## Ratings

Exhibit 11

| Category | Moody's Rating |
|---|---|
| **NORTHERN STATES POWER COMPANY (MINNESOTA)** | |
| Outlook | Stable |
| Issuer Rating | A2 |
| First Mortgage Bonds | Aa3 |
| Senior Secured Shelf | (P)Aa3 |
| Sr Unsec Bank Credit Facility | A2 |
| Senior Unsecured Shelf | (P)A2 |
| Commercial Paper | P-1 |
| **PARENT: XCEL ENERGY INC.** | |
| Outlook | Stable |
| Issuer Rating | Baa1 |
| Sr Unsec Bank Credit Facility | Baa1 |
| Senior Unsecured | Baa1 |
| Subordinate Shelf | (P)Baa2 |
| Pref. Shelf | (P)Baa3 |
| Commercial Paper | P-2 |

*Source: Moody's Investors Service*

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# Northern States Power Co.

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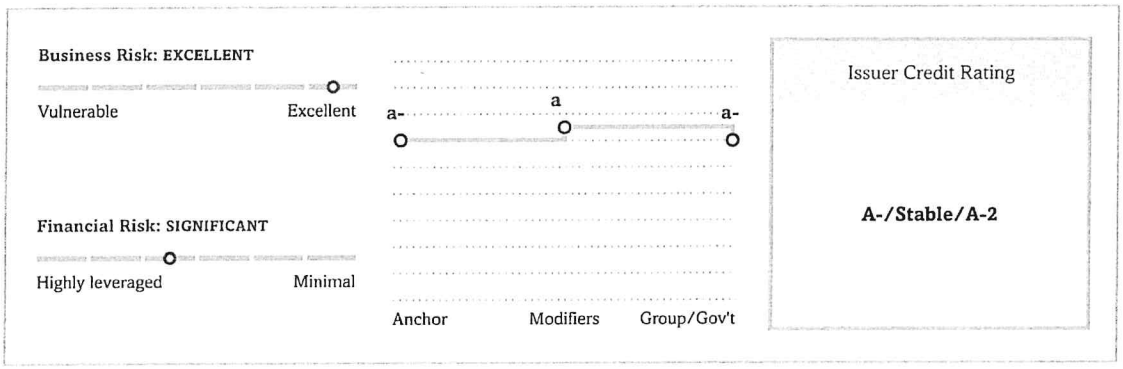
# Northern States Power Co.




## Credit Highlights

**Overview**

| Key strengths | Key risks |
|---|---|
| Low-risk vertically integrated electric and natural gas utility. | Operational and environmental risks associated with nuclear and coal generation. |
| Large, mostly residential customer base. | Geographic diversity largely limited to Minnesota. |
| Steady utility operating cash flow. | Negative discretionary cash flow, indicating external funding needs. |

***High-level residential customer load limits revenue impact of COVID-19.*** Residential customers comprise about 90% of Northern States Power Co.'s (NSP's) customers and 33% of NSP's revenue, dampening weakened revenue from industrial and commercial customers after a mandated pandemic-related lockdown.

***We expect the company to maintain credit measures consistent with its current rating.*** Our base-case scenario, with additional capital expenditure for renewable generation projects, expects NSP to maintain adjusted funds from operations (FFO) to debt in the 20%-22% range, above the midpoint of the financial risk profile benchmark range.

***Efforts underway to change the generation mix toward sustainable renewable wind energy.*** In line with parent Xcel Energy Inc., NSP has taken steps to rebalance the generation mix with investments in wind generation projects in addition to existing wind generation capacity. The gradual change toward the corporate target of 80% carbon reduction by 2030 began in 2005.

**Outlook: Stable**

The stable outlook on NSP reflects that on Xcel. We base the outlook on our expectation that Xcel's management will continue to reach constructive regulatory outcomes to avoid any significant rise in business risk for the regulated utilities. Specifically, our base-case forecast includes adjusted FFO to debt of about 16% and assumes the company will continue to fund its capital investments in a balanced manner to support its capital structure.

### Downside scenario

We could lower the rating on Xcel and its subsidiaries, including NSP, if Xcel's financial ratios weaken and consistently reflect adjusted FFO to debt at or below 15%. This would most likely occur if rate-case outcomes are weaker than expected and capital spending materially rises.

### Upside scenario

We could raise the ratings if Xcel improves its collective ability to manage regulatory risk across its jurisdictions, resulting in a consistent improvement to its business risk. We could also raise the rating if the company's consolidated financial measures consistently exceed our baseline forecast, including adjusted FFO to debt of greater than 20%.

## Our Base-Case Scenario

**Assumptions**

- Continued cost recovery through various regulatory mechanisms;
- Annual gross margin in the 60%-62% range;
- Annual capital spending averaging about $1.8 billion through 2022;
- Annual dividends averaging about $320 million;
- Negative discretionary cash flow indicates external funding needs; and
- All debt maturities are refinanced.

### Key metrics

| | 2020E | 2021E | 2022E |
|---|---|---|---|
| Adjusted FFO to debt (%) | 20.5-22.5 | 20-22 | 19-21 |
| Adjusted debt to EBITDA (x) | 3.7-4.1 | 3.8-4.2 | 4-4.4 |
| Adjusted FFO to cash interest(x) | 6.4-6.8 | 6.1-6.5 | 5.7-6.1 |

E--Expected. FFO--Funds from operations.

## Company Description

Minneapolis-based NSP is a vertically integrated electric and natural gas distribution utility operating in Minnesota, North Dakota, and South Dakota.

## Peer comparison

**Table 1**

**Northern States Power Co.--Peer Comparison**

**Industry Sector: Electric**

| | Northern States Power Co. | Wisconsin Electric Power Co. | Consumers Energy Co. | Union Electric Co. d/b/a Ameren Missouri |
|---|---|---|---|---|
| Ratings as of Oct. 27, 2020 | A-/Stable/A-2 | A-/Stable/A-2 | A-/Stable/A-2 | BBB+/Stable/A-2 |
| | --Fiscal year ended Dec. 31, 2019 | | | |
| **(Mil. $)** | | | | |
| Revenue | 5,111.8 | 3,496.7 | 6,341.5 | 3,243.0 |
| EBITDA | 1,866.3 | 1,300.4 | 2,246.6 | 1,288.0 |
| Funds from operations (FFO) | 1,524.5 | 688.0 | 1,813.6 | 982.3 |
| Interest expense | 357.8 | 221.5 | 340.1 | 221.3 |
| Cash interest paid | 237.4 | 566.6 | 301.1 | 204.7 |
| Cash flow from operations | 1,194.2 | 892.9 | 1,678.6 | 1,056.3 |
| Capital expenditure | 1,437.1 | 627.8 | 2,181.0 | 1,095.0 |
| Free operating cash flow (FOCF) | (243.0) | 265.1 | (502.5) | (38.7) |
| Discretionary cash flow (DCF) | (709.6) | (94.3) | (1,094.5) | (470.2) |
| Cash and short-term investments | 126.3 | 19.1 | 11.0 | 9.0 |
| Debt | 5,979.9 | 4,250.8 | 8,369.6 | 4,226.0 |
| Equity | 6,081.8 | 3,576.3 | 7,737.0 | 4,309.0 |
| **Adjusted ratios** | | | | |
| EBITDA margin (%) | 36.5 | 37.2 | 35.4 | 39.7 |
| Return on capital (%) | 8.2 | 11.2 | 7.7 | 8.5 |
| EBITDA interest coverage (x) | 5.2 | 5.9 | 6.6 | 5.8 |
| FFO cash interest coverage (x) | 7.4 | 2.2 | 7.0 | 5.8 |
| Debt/EBITDA (x) | 3.2 | 3.3 | 3.7 | 3.3 |
| FFO/debt (%) | 25.5 | 16.2 | 21.7 | 23.2 |
| Cash flow from operations/debt (%) | 20.0 | 21.0 | 20.1 | 25.0 |
| FOCF/debt (%) | (4.1) | 6.2 | (6.0) | (0.9) |

*Northern States Power Co.*

**Table 1**

**Northern States Power Co.--Peer Comparison (cont.)**

**Industry Sector: Electric**

| | Northern States Power Co. | Wisconsin Electric Power Co. | Consumers Energy Co. | Union Electric Co. d/b/a Ameren Missouri |
|---|---|---|---|---|
| DCF/debt (%) | (11.9) | (2.2) | (13.1) | (11.1) |

## Business Risk: Excellent

NSP's business risk profile incorporates its low-risk, rate-regulated utility operations that serve over 2 million electric and natural gas customers in Minnesota, North Dakota, and South Dakota. Although NSP operates in three states, there is limited geographic and regulatory diversity because NSP earns about 90% of its revenue in Minnesota. Revenue stability is supported with a customer base that is about 90% residential contributing about 33% to the revenues. NSP has implemented multiyear rate plans and benefits from credit-supportive infrastructure riders. As NSP's generation capacity consists of nuclear (28%) and coal-fired (23%), the higher operating risk associated with nuclear-power generation and potential environmental risks from coal generation marginally weakens the company's business risk profile.

## Financial Risk: Significant

Our stand-alone financial risk profile for NSP incorporates a base-case scenario that includes adjusted FFO to debt weakening toward 20%, just above the midpoint of the benchmark range of the significant category. Supporting the financial risk profile determination is the supplemental ratio of adjusted FFO cash interest coverage in the 5.7x-6.8x range. In addition, we expect the utility's elevated capital spending, when combined with its dividend, will result in negative discretionary cash flow. To offset the negative cash flow, we expect external funding, such as debt issuances and cash injections within the Xcel Energy group. We expect debt leverage, as indicated by debt to EBITDA, to rise and remain in the 3.7x-4.4x range over the next few years. Reflecting the company's steady cash flow and rate-regulated utility operations, we base our risk assessment on our medial volatility table benchmarks. These are more relaxed benchmarks than those used for a typical corporate issuer.

NSP's financial measures in our base-case scenario will consistently be above the midpoint of benchmark range for the financial risk profile, albeit weakening over the next few years.

### Financial summary

**Table 2**

**Northern States Power Co.--Financial Summary**

**Industry Sector: Electric**

| | --Fiscal year ended Dec. 31-- | | | | |
|---|---|---|---|---|---|
| | 2019 | 2018 | 2017 | 2016 | 2015 |
| **(Mil. $)** | | | | | |
| Revenue | 5,111.8 | 5,121.9 | 5,102.0 | 4,900.3 | 4,756.8 |

**Table 2**

| Northern States Power Co.--Financial Summary (cont.) | | | | | |
|---|---|---|---|---|---|
| EBITDA | 1,866.3 | 1,738.3 | 1,852.7 | 1,807.8 | 1,459.9 |
| Funds from operations (FFO) | 1,524.5 | 1,580.5 | 1,524.3 | 1,524.7 | 1,286.4 |
| Interest expense | 357.8 | 356.9 | 378.6 | 372.3 | 346.4 |
| Cash interest paid | 237.4 | 246.8 | 257.5 | 244.1 | 226.7 |
| Cash flow from operations | 1,194.2 | 1,477.6 | 1,256.1 | 1,290.4 | 1,310.8 |
| Capital expenditure | 1,437.1 | 1,158.8 | 988.5 | 1,186.4 | 1,837.7 |
| Free operating cash flow (FOCF) | (243.0) | 318.8 | 267.6 | 103.9 | (526.9) |
| Discretionary cash flow (DCF) | (709.6) | (137.5) | (239.0) | (292.0) | (786.1) |
| Cash and short-term investments | 126.3 | 50.0 | 43.8 | 52.8 | 42.6 |
| Gross available cash | 126.3 | 50.0 | 43.8 | 47.6 | 42.6 |
| Debt | 5,979.9 | 5,661.7 | 5,605.4 | 5,885.9 | 5,734.7 |
| Equity | 6,081.8 | 5,573.1 | 5,475.6 | 5,355.6 | 5,167.1 |
| **Adjusted ratios** | | | | | |
| EBITDA margin (%) | 36.5 | 33.9 | 36.3 | 36.9 | 30.7 |
| Return on capital (%) | 8.2 | 8.3 | 9.4 | 9.9 | 8.4 |
| EBITDA interest coverage (x) | 5.2 | 4.9 | 4.9 | 4.9 | 4.2 |
| FFO cash interest coverage (x) | 7.4 | 7.4 | 6.9 | 7.2 | 6.7 |
| Debt/EBITDA (x) | 3.2 | 3.3 | 3.0 | 3.3 | 3.9 |
| FFO/debt (%) | 25.5 | 27.9 | 27.2 | 25.9 | 22.4 |
| Cash flow from operations/debt (%) | 20.0 | 26.1 | 22.4 | 21.9 | 22.9 |
| FOCF/debt (%) | (4.1) | 5.6 | 4.8 | 1.8 | (9.2) |
| DCF/debt (%) | (11.9) | (2.4) | (4.3) | (5.0) | (13.7) |

## Reconciliation

**Table 3**

**Northern States Power Co.--Reconciliation Of Reported Amounts With S&P Global Ratings' Adjusted Amounts**

| | --12 months ended June 30, 2020-- | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Northern States Power Co. reported amounts (mil. $)** | | | | | | | | | | |
| | **Debt** | **Shareholders' equity** | **Revenue** | **EBITDA** | **Operating income** | **Interest expense** | **S&P Global Ratings' adjusted EBITDA** | **Cash flow from operations** | **Dividends** | **Capital expenditure** |
| | 6,202.3 | 6,289.8 | 5,006.4 | 1,591.1 | 787.8 | 227.9 | 1,825.3 | 1,232.2 | 483.1 | 1,435.3 |
| **S&P Global Ratings' adjustments** | | | | | | | | | | |
| Cash taxes paid | -- | -- | -- | -- | -- | -- | (84.8) | -- | -- | -- |
| Cash interest paid | -- | -- | -- | -- | -- | -- | (214.1) | -- | -- | -- |
| Reported lease liabilities | 566.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Operating leases | -- | -- | -- | 7.7 | 10.3 | 10.3 | (10.3) | (2.6) | -- | -- |
| Postretirement benefit obligations/deferred compensation | 157.9 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

*Northern States Power Co.*

**Table 3**

**Northern States Power Co.--Reconciliation Of Reported Amounts With S&P Global Ratings' Adjusted Amounts (cont.)**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Accessible cash and liquid investments | (784.3) | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Capitalized interest | -- | -- | -- | -- | -- | 13.2 | (13.2) | (13.2) | -- | (13.2) |
| Power purchase agreements | 353.2 | -- | -- | 50.8 | 12.7 | 12.7 | (12.7) | 38.1 | -- | 38.1 |
| Asset-retirement obligations | 41.9 | -- | -- | 107.1 | 107.1 | 107.1 | -- | -- | -- | -- |
| Nonoperating income (expense) | -- | -- | -- | -- | 36.9 | -- | -- | -- | -- | -- |
| Debt: Other | (546.5) | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| EBITDA: Other income/(expense) | -- | -- | -- | 68.6 | 68.6 | -- | -- | -- | -- | -- |
| Depreciation and amortization: Other | -- | -- | -- | -- | (68.6) | -- | -- | -- | -- | -- |
| Total adjustments | (211.4) | 0.0 | 0.0 | 234.2 | 167.0 | 143.3 | (335.1) | 22.3 | 0.0 | 24.9 |

**S&P Global Ratings' adjusted amounts**

| Debt | Equity | Revenue | EBITDA | EBIT | Interest expense | Funds from operations | Cash flow from operations | Dividends | Capital expenditure |
|---|---|---|---|---|---|---|---|---|---|
| 5,990.9 | 6,289.8 | 5,006.4 | 1,825.3 | 954.8 | 371.2 | 1,490.2 | 1,254.5 | 483.1 | 1,460.2 |

## Liquidity: Adequate

We assess the company's stand-alone liquidity as adequate because we believe its liquidity sources are likely to cover uses by more than 1.1x over the next 12 months and meet cash outflows even with a 10% decline in EBITDA. The assessment also reflects our view of the company's generally prudent risk management, sound relationship with banks, and a generally satisfactory standing in credit markets.

### Principal liquidity sources

- Cash and liquid investments of about $130 million
- Credit facility availability of about $800 million
- Estimated cash FFO of roughly $1.25 billion

### Principal liquidity uses

- Debt maturities, including outstanding commercial paper, of about $330 million
- Capital spending of about $1.3 billion
- Dividends of about $320 million

**Environmental, Social, And Governance**

Governance and social factors for the company are consistent with what we see across the industry for other publicly traded utilities.

Parent Xcel's fuel mix consists of approximately 24% renewables, 13% nuclear, 33% natural gas, 26% coal, and 4% hydro and other sources. The company's reliance on coal-fired generation exposes it to the ongoing cost of operating older units in the face of disruptive technological advances and the potential for more environmental regulations requiring significant capital investments. However, the company is trying to reduce its carbon footprint; it plans to shutter upwards of 3,100 megawatts (MW) of coal-fueled generation in the U.S. and will convert roughly 1,000 MW of coal to natural gas, invest in a combined-cycle natural gas plant, invest in 3,500 MW of solar generation, and invest in 2,250 MW of wind generation. By pursuing greater renewable generation, the company is meeting customer demand for greener energy. Additionally, parent Xcel operates two nuclear plants, with one expected to remain open through 2034, that generate around 1,700 MW of power. Although carbon-free, the company's nuclear generation portfolio increases operating risk and exposes it to longer-term nuclear waste storage risks.

## Group Influence

Under our group rating methodology, we consider NSP as a core subsidiary of parent Xcel, reflecting our view that NSP is highly unlikely to be sold, is integral to the overall group strategy, possesses a strong long-term commitment from senior management, and is closely linked to the parent's name and reputation. We assess NSP's issuer credit rating to be in line with Xcel's group credit profile of 'a-'.

## Issue Ratings - Subordination Risk Analysis

We base the short-term rating of 'A-2' on the issuer credit rating on the company.

## Issue Ratings - Recovery Analysis

NSP's first mortgage bonds benefit from a first-priority lien on substantially all 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.

## Ratings Score Snapshot

**Issuer Credit Rating**

A-/Stable/A-2

*Northern States Power Co.*

**Business risk: Excellent**

- **Country risk:** Very low
- **Industry risk:** Very low
- **Competitive position:** Strong

**Financial risk: Significant**

- **Cash flow/leverage:** Significant

**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:** Strong (no impact)
- **Comparable rating analysis:** Positive (+1 notch)

**Stand-alone credit profile : a**

- **Group credit profile:** a-
- **Entity status within group:** Core (-1 notch from SACP)

## Related Criteria

- Criteria - Corporates - General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- 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
- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- Criteria - Corporates - Utilities: Key Credit Factors For The Regulated Utilities Industry, 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

*Northern States Power Co.*

- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009

**Business And Financial Risk Matrix**

| | Financial Risk Profile | | | | | |
|---|---|---|---|---|---|---|
| **Business 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+ | b | b- |

**Ratings Detail (As Of December 18, 2020)***

| | | |
|---|---|---|
| **Northern States Power Co.** | | |
| Issuer Credit Rating | | A-/Stable/A-2 |
| Commercial Paper | | |
| *Local Currency* | | A-2 |
| Senior Secured | | A |
| **Issuer Credit Ratings History** | | |
| 23-Jun-2010 | *Foreign Currency* | A-/Stable/A-2 |
| 10-Jun-2009 | | BBB+/Positive/A-2 |
| 16-Oct-2007 | | BBB+/Stable/A-2 |
| 23-Jun-2010 | *Local Currency* | A-/Stable/A-2 |
| 10-Jun-2009 | | BBB+/Positive/A-2 |
| 16-Oct-2007 | | BBB+/Stable/A-2 |

*Unless otherwise noted, all ratings in this report are global scale ratings. S&P Global Ratings' credit ratings on the global scale are comparable across countries. S&P Global Ratings' credit ratings on a national scale are relative to obligors or obligations within that specific country. Issue and debt ratings could include debt guaranteed by another entity, and rated debt that an entity guarantees.

JUNE 23, 2017

INFRASTRUCTURE

MOODY'S
INVESTORS SERVICE

RATING METHODOLOGY

# Regulated Electric and Gas Utilities

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This rating methodology replaces "Regulated Electric and Gas Utilities" last revised on December 23, 2013. We have updated some outdated links and removed certain issuer-specific information.

## Summary

This rating methodology explains our approach to assessing credit risk for regulated electric and gas utilities globally. This document does not include an exhaustive treatment of all factors that are reflected in our ratings but should enable the reader to understand the qualitative considerations and financial information and ratios that are usually most important for ratings in this sector.[1]

This report includes a detailed rating grid which is a reference tool that can be used to approximate credit profiles within the regulated electric and gas utility sector in most cases. The grid provides summarized guidance for the factors that are generally most important in assigning ratings to companies in the regulated electric and gas utility industry. However, the grid is a summary that does not include every rating consideration. The weights shown for each factor in the grid represent an approximation of their importance for rating decisions but actual importance may vary substantially. In addition, the grid in this document uses historical results while ratings are based on our forward-looking expectations. As a result, the grid-indicated rating is not expected to match the actual rating of each company.

THIS METHODOLOGY WAS UPDATED ON AUGUST 2, 2018. WE HAVE MADE MINOR FORMATTING ADJUSTMENTS THROUGHOUT THE METHODOLOGY.

THIS RATING METHODOLOGY WAS UPDATED ON FEBRUARY 15, 2018. WE HAVE CORRECTED THE FORMATTING OF THE FACTOR 4: FINANCIAL STRENGTH TABLE ON PAGE 34.

THIS RATING METHODOLOGY WAS UPDATED ON SEPTEMBER 27, 2017. WE REMOVED A DUPLICATE FOOTNOTE THAT WAS PLACED IN THE MIDDLE OF THE TEXT ON PAGE 7.

[1] This update may not be effective in some jurisdictions until certain requirements are met.

The grid contains four key factors that are important in our assessment for ratings in the regulated electric and gas utility sector:

1. Regulatory Framework
2. Ability to Recover Costs and Earn Returns
3. Diversification
4. Financial Strength

Some of these factors also encompass a number of sub-factors. There is also a notching factor for holding company structural subordination.

This rating methodology is not intended to be an exhaustive discussion of all factors that our analysts consider in assigning ratings in this sector. We note that our analysis for ratings in this sector covers factors that are common across all industries such as ownership, management, liquidity, corporate legal structure, governance and country related risks which are not explained in detail in this document, as well as factors that can be meaningful on a company-specific basis. Our ratings consider these and other qualitative considerations that do not lend themselves to a transparent presentation in a grid format. The grid used for this methodology reflects a decision to favor a relatively simple and transparent presentation rather than a more complex grid that might map grid-indicated ratings more closely to actual ratings.

Highlights of this report include:

» An overview of the rated universe

» A summary of the rating methodology

» A discussion of the key rating factors that drive ratings

» Comments on the rating methodology assumptions and limitations, including a discussion of rating considerations that are not included in the grid

The Appendices show the full grid (Appendix A), our approach to ratings within a utility family (Appendix B), a description of the various types of companies rated under this methodology (Appendix C), key industry issues over the intermediate term (Appendix D), regional and other considerations (Appendix E), and treatment of power purchase agreements (Appendix F).

This methodology describes the analytical framework used in determining credit ratings. In some instances our analysis is also guided by additional publications which describe our approach for analytical considerations that are not specific to any single sector. Examples of such considerations include but are not limited to: the assignment of short-term ratings, the relative ranking of different classes of debt and hybrid securities, how sovereign credit quality affects non-sovereign issuers, and the assessment of credit support from other entities. A link to documents that describe our approach to such cross-sector credit rating methodological considerations can be found in the Related Research section of this report.

## About the Rated Universe

The Regulated Electric and Gas Utilities rating methodology applies to rate-regulated[2] electric and gas utilities that are not Networks[3]. Regulated Electric and Gas Utilities are companies whose predominant[4] business is the sale of electricity and/or gas or related services under a rate-regulated framework, in most cases to retail customers. Also included under this methodology are rate-regulated utilities that own generating assets as any material part of their business, utilities whose charges or bills to customers include a meaningful component related to the electric or gas commodity, utilities whose rates are regulated at a sub-sovereign level (e.g. by provinces, states or municipalities), and companies providing an independent system operator function to an electric grid. Companies rated under this methodology are primarily rate-regulated monopolies or, in certain circumstances, companies that may not be outright monopolies but where government regulation effectively sets prices and limits competition.

This rating methodology covers regulated electric and gas utilities worldwide. These companies are engaged in the production, transmission, coordination, distribution and/or sale of electricity and/or natural gas, and they are either investor owned companies, commercially oriented government owned companies or, in the case of independent system operators, not-for-profit or similar entities. As detailed in Appendix C, this methodology covers a wide variety of companies active in the sector, including vertically integrated utilities, transmission and distribution utilities with retail customers and/or sub-sovereign regulation, local gas distribution utility companies (LDCs), independent system operators, and regulated generation companies. These companies may be operating companies or holding companies.

An over-arching consideration for regulated utilities is the regulatory environment in which they operate. While regulation is also a key consideration for networks, a utility's regulatory environment is in comparison often more dynamic and more subject to political intervention. The direct relationship that a regulated utility has with the retail customer, including billing for electric or gas supply that has substantial price volatility, can lead to a more politically charged rate-setting environment. Similarly, regulation at the sub-sovereign level is often more accessible for participation by interveners, including disaffected customers and the politicians who want their votes. Our views of regulatory environments evolve over time in accordance with our observations of regulatory, political, and judicial events that affect issuers in the sector.

This methodology pertains to regulated electric and gas utilities and excludes the following types of issuers, which are covered by separate rating methodologies: Regulated Networks, Unregulated Utilities and Power Companies, Public Power Utilities, Municipal Joint Action Agencies, Electric Cooperatives, Regulated Water Companies and Natural Gas Pipelines.[5]

The Regulated Electric and Gas Utility sector is predominantly investment grade, reflecting the stability generally conferred by regulation that typically sets prices and also limits competition, such that defaults have been lower than in many other non-financial corporate sectors. However, the nature of regulation can

[2] Companies in many industries are regulated. We use the term rate-regulated to distinguish companies whose rates (by which we also mean tariffs or revenues in general) are set by regulators.

[3] Regulated Electric and Gas Networks are companies whose predominant business is purely the transmission and/or distribution of electricity and/or natural gas without involvement in the procurement or sale of electricity and/or gas; whose charges to customers thus do not include a meaningful commodity cost component; which sell mainly (or in many cases exclusively) to non-retail customers; and which are rate-regulated under a national framework.

[4] We generally consider a company to be predominantly a regulated electric and gas utility when a majority of its cash flows, prospectively and on a sustained basis, are derived from regulated electric and gas utility businesses. Since cash flows can be volatile (such that a company might have a majority of utility cash flows simply due to a cyclical downturn in its non-utility businesses), we may also consider the breakdown of assets and/or debt of a company to determine which business is predominant.

[5] A link to credit rating methodologies covering these and other sectors can be found in the Related Research section of this report.

vary significantly from jurisdiction to jurisdiction. Most issuers at the lower end of the ratings spectrum operate in challenging regulatory environments.

## About this Rating Methodology

This report explains the rating methodology for regulated electric and gas utilities in six sections, which are summarized as follows:

### 1. Identification and Discussion of the Rating Factors in the Grid

The grid in this rating methodology focuses on four rating factors. The four factors are comprised of sub-factors that provide further detail:

**Factor / Sub-Factor Weighting - Regulated Utilities**

| Broad Rating Factors | Broad Rating Factor Weighting | Rating Sub-Factor | Sub-Factor Weighting |
|---|---|---|---|
| Regulatory Framework | 25% | Legislative and Judicial Underpinnings of the Regulatory Framework | 12.5% |
| | | Consistency and Predictability of Regulation | 12.5% |
| Ability to Recover Costs and Earn Returns | 25% | Timeliness of Recovery of Operating and Capital Costs | 12.5% |
| | | Sufficiency of Rates and Returns | 12.5% |
| Diversification | 10% | Market Position | 5%* |
| | | Generation and Fuel Diversity | 5%** |
| Financial Strength, Key Financial Metrics | 40% | | |
| | | CFO pre-WC + Interest / Interest | 7.5% |
| | | CFO pre-WC / Debt | 15.0% |
| | | CFO pre-WC – Dividends / Debt | 10.0% |
| | | Debt/Capitalization | 7.5% |
| Total | 100% | | 100% |
| Notching Adjustment | | | |
| Holding Company Structural Subordination | | | 0 to -3 |

*10% weight for issuers that lack generation; **0% weight for issuers that lack generation

### 2. Measurement or Estimation of Factors in the Grid

We explain our general approach for scoring each grid factor and show the weights used in the grid. We also provide a rationale for why each of these grid components is meaningful as a credit indicator. The information used in assessing the sub-factors is generally found in or calculated from information in company financial statements, derived from other observations or estimated by our analysts.[6] All of the quantitative credit metrics incorporate Moody's standard adjustments to income statement, cash flow statement and balance sheet amounts for restructuring, impairment, off-balance sheet accounts, receivable securitization programs, under-funded pension obligations, and recurring operating leases.[7]

[6] For definitions of our most common ratio terms, please see "Moody's Basic Definitions for Credit Statistics, User's Guide," a link to which may be found in the Related Research section of this report.

[7] Our standard adjustments are described in "Financial Statement Adjustments in the Analysis of Non-Financial Corporations". A link to this and other sector and cross-sector credit rating methodologies can be found in the Related Research section of this report.

Our ratings are forward-looking and reflect our expectations for future financial and operating performance. However, historical results are helpful in understanding patterns and trends of a company's performance as well as for peer comparisons. We utilize historical data (in most cases, an average of the last three years of reported results) in the rating grid. However, the factors in the grid can be assessed using various time periods. For example, rating committees may find it analytically useful to examine both historic and expected future performance for periods of several years or more, or for individual twelve month periods.

## 3. Mapping Factors to the Rating Categories

After estimating or calculating each sub-factor, the outcomes for each of the sub-factors are mapped to a broad Moody's rating category (Aaa, Aa, A, Baa, Ba, B, or Caa).

## 4. Assumptions, Limitations and Rating Considerations Not Included in the Grid

This section discusses limitations in the use of the grid to map against actual ratings, some of the additional factors that are not included in the grid but can be important in determining ratings, and limitations and assumptions that pertain to the overall rating methodology.

## 5. Determining the Overall Grid-Indicated Rating[8]

To determine the overall grid-indicated rating, we convert each of the sub-factor ratings into a numeric value based upon the scale below.

| Aaa | Aa | A | Baa | Ba | B | Caa | Ca |
|---|---|---|---|---|---|---|---|
| 1 | 3 | 6 | 9 | 12 | 15 | 18 | 20 |

The numerical score for each sub-factor is multiplied by the weight for that sub-factor with the results then summed to produce a composite weighted-factor score. The composite weighted factor score is then mapped back to an alphanumeric rating based on the ranges in the table below.

**Grid-Indicated Rating**

| Grid-Indicated Rating | Aggregate Weighted Total Factor Score |
|---|---|
| Aaa | $x < 1.5$ |
| Aa1 | $1.5 \leq x < 2.5$ |
| Aa2 | $2.5 \leq x < 3.5$ |
| Aa3 | $3.5 \leq x < 4.5$ |
| A1 | $4.5 \leq x < 5.5$ |
| A2 | $5.5 \leq x < 6.5$ |
| A3 | $6.5 \leq x < 7.5$ |
| Baa1 | $7.5 \leq x < 8.5$ |
| Baa2 | $8.5 \leq x < 9.5$ |
| Baa3 | $9.5 \leq x < 10.5$ |

[8] In general, the grid-indicated rating is oriented to the Corporate Family Rating (CFR) for speculative-grade issuers and the senior unsecured rating for investment-grade issuers. For issuers that benefit from ratings uplift due to parental support, government ownership or other institutional support, the grid-indicated rating is oriented to the baseline credit assessment. For an explanation of baseline credit assessment, please refer to our rating methodology on government-related issuers. Individual debt instrument ratings also factor in decisions on notching for seniority level and collateral. The documents that provide broad guidance for these notching decisions are our rating methodologies on loss given default for speculative grade non-financial companies and for aligning corporate instrument ratings based on differences in security and priority of claim. The link to these and other sector and cross-sector credit rating methodologies can be found in the Related Research section of this report.

**Grid-Indicated Rating**

| Grid-Indicated Rating | Aggregate Weighted Total Factor Score |
|---|---|
| Ba1 | 10.5 ≤ x < 11.5 |
| Ba2 | 11.5 ≤ x < 12.5 |
| Ba3 | 12.5 ≤ x < 13.5 |
| B1 | 13.5 ≤ x < 14.5 |
| B2 | 14.5 ≤ x < 15.5 |
| B3 | 15.5 ≤ x < 16.5 |
| Caa1 | 16.5 ≤ x < 17.5 |
| Caa2 | 17.5 ≤ x < 18.5 |
| Caa3 | 18.5 ≤ x < 19.5 |
| Ca | x ≥ 19.5 |

For example, an issuer with a composite weighted factor score of 11.7 would have a Ba2 grid-indicated rating.

## 6. Appendices

The Appendices present a full grid and provide additional commentary and insights on our view of credit risks in this industry.

## Discussion of the Grid Factors

Our analysis of electric and gas utilities focuses on four broad factors:

» Regulatory Framework

» Ability to Recover Costs and Earn Returns

» Diversification

» Financial Strength

There is also a notching factor for holding company structural subordination.

### Factor 1: Regulatory Framework (25%)

Why It Matters

For rate-regulated utilities, which typically operate as a monopoly, the regulatory environment and how the utility adapts to that environment are the most important credit considerations. The regulatory environment is comprised of two rating factors - the Regulatory Framework and its corollary factor, the Ability to Recover Costs and Earn Returns. Broadly speaking, the Regulatory Framework is the foundation for how all the decisions that affect utilities are made (including the setting of rates), as well as the predictability and consistency of decision-making provided by that foundation. The Ability to Recover Costs and Earn Returns relates more directly to the actual decisions, including their timeliness and the rate-setting outcomes.

Utility rates[9] are set in a political/regulatory process rather than a competitive or free-market process; thus, the Regulatory Framework is a key determinant of the success of utility. The Regulatory Framework has many components: the governing body and the utility legislation or decrees it enacts, the manner in which regulators are appointed or elected, the rules and procedures promulgated by those regulators, the judiciary that interprets the laws and rules and that arbitrates disagreements, and the manner in which the utility manages the political and regulatory process. In many cases, utilities have experienced credit stress or default primarily or at least secondarily because of a break-down or obstacle in the Regulatory Framework – for instance, laws that prohibited regulators from including investments in uncompleted power plants or plants not deemed "used and useful" in rates, or a disagreement about rate-making that could not be resolved until after the utility had defaulted on its debts.

How We Assess Legislative and Judicial Underpinnings of the Regulatory Framework for the Grid

For this sub-factor, we consider the scope, clarity, transparency, supportiveness and granularity of utility legislation, decrees, and rules as they apply to the issuer. We also consider the strength of the regulator's authority over rate-making and other regulatory issues affecting the utility, the effectiveness of the judiciary or other independent body in arbitrating disputes in a disinterested manner, and whether the utility's monopoly has meaningful or growing carve-outs. In addition, we look at how well developed the framework is – both how fully fleshed out the rules and regulations are and how well tested it is – the extent to which regulatory or judicial decisions have created a body of precedent that will help determine future rate-making. Since the focus of our scoring is on each issuer, we consider how effective the utility is in navigating the regulatory framework – both the utility's ability to shape the framework and adapt to it.

A utility operating in a regulatory framework that is characterized by legislation that is credit supportive of utilities and eliminates doubt by prescribing many of the procedures that the regulators will use in determining fair rates (which legislation may show evidence of being responsive to the needs of the utility in general or specific ways), a long history of transparent rate-setting, and a judiciary that has provided ample precedent by impartially adjudicating disagreements in a manner that addresses ambiguities in the laws and rules will receive higher scores in the Legislative and Judicial Underpinnings sub-factor. A utility operating in a regulatory framework that, by statute or practice, allows the regulator to arbitrarily prevent the utility from recovering its costs or earning a reasonable return on prudently incurred investments, or where regulatory decisions may be reversed by politicians seeking to enhance their populist appeal will receive a much lower score.

In general, we view national utility regulation as being less liable to political intervention than regulation by state, provincial or municipal entities, so the very highest scoring in this sub-factor is reserved for this category. However, we acknowledge that states and provinces in some countries may be larger than small nations, such that their regulators may be equally "above-the-fray" in terms of impartial and technically-oriented rate setting, and very high scoring may be appropriate.

[9] In jurisdictions where utility revenues include material government subsidy payments, we consider utility rates to be inclusive of these payments, and we thus evaluate sub-factors 1a, 1b, 2a and 2b in light of both rates and material subsidy payments. For example, we would consider the legal and judicial underpinnings and consistency and predictability of subsidies as well as rates.

The relevant judicial system can be a major factor in the regulatory framework. This is particularly true in litigious societies like the United States, where disagreements between the utility and its state or municipal regulator may eventually be adjudicated in federal district courts or even by the US Supreme Court. In addition, bankruptcy proceedings in the US take place in federal courts, which have at times been able to impose rate settlement agreements on state or municipal regulators. As a result, the range of decisions available to state regulators may be effectively circumscribed by court precedent at the state or federal level, which we generally view as favorable for the credit- supportiveness of the regulatory framework.

Electric and gas utilities are generally presumed to have a strong monopoly that will continue into the foreseeable future, and this expectation has allowed these companies to have greater leverage than companies in other sectors with similar ratings. Thus, the existence of a monopoly in itself is unlikely to be a driver of strong scoring in this sub-factor. On the other hand, a strong challenge to the monopoly could cause lower scoring, because the utility can only recover its costs and investments and service its debt if customers purchase its services. There have some instances of incursions into utilities' monopoly, including municipalization, self-generation, distributed generation with net metering, or unauthorized use (beyond the level for which the utility receives compensation in rates). Incursions that are growing significantly or having a meaningful impact on rates for customers that remain with the utility could have a negative impact on scoring of this sub-factor and on factor 2 - Ability to Recover Costs and Earn Returns.

The scoring of this sub-factor may not be the same for every utility in a particular jurisdiction. We have observed that some utilities appear to have greater sway over the relevant utility legislation and promulgation of rules than other utilities – even those in the same jurisdiction. The content and tone of publicly filed documents and regulatory decisions sometimes indicates that the management team at one utility has better responsiveness to and credibility with its regulators or legislators than the management at another utility.

While the underpinnings to the regulatory framework tend to change relatively slowly, they do evolve, and our factor scoring will seek to reflect that evolution. For instance, a new framework will typically become tested over time as regulatory decisions are issued, or perhaps litigated, thereby setting a body of precedent. Utilities may seek changes to laws in order to permit them to securitize certain costs or collect interim rates, or a jurisdiction in which rates were previously recovered primarily in base rate proceedings may institute riders and trackers. These changes would likely impact scoring of sub-factor 2b - Timeliness of Recovery of Operating and Capital Costs, but they may also be sufficiently significant to indicate a change in the regulatory underpinnings. On the negative side, a judiciary that had formerly been independent may start to issue decisions that indicate it is conforming its decisions to the expectations of an executive branch that wants to mandate lower rates.

## Factor 1a: Legislative and Judicial Underpinnings of the Regulatory Framework (12.5%)

| Aaa | Aa | A | Baa |
|---|---|---|---|
| Utility regulation occurs under a fully developed framework that is national in scope based on legislation that provides the utility a nearly absolute monopoly (see note 1) within its service territory, an unquestioned assurance that rates will be set in a manner that will permit the utility to make and recover all necessary investments, an extremely high degree of clarity as to the manner in which utilities will be regulated and prescriptive methods and procedures for setting rates. Existing utility law is comprehensive and supportive such that changes in legislation are not expected to be necessary; or any changes that have occurred have been strongly supportive of utilities credit quality in general and sufficiently forward-looking so as to address problems before they occurred. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility should they occur, including access to national courts, very strong judicial precedent in the interpretation of utility laws, and a strong rule of law. We expect these conditions to continue. | Utility regulation occurs under a fully developed national, state or provincial framework based on legislation that provides the utility an extremely strong monopoly (see note 1) within its service territory, a strong assurance, subject to limited review, that rates will be set in a manner that will permit the utility to make and recover all necessary investments, a very high degree of clarity as to the manner in which utilities will be regulated and reasonably prescriptive methods and procedures for setting rates. If there have been changes in utility legislation, they have been timely and clearly credit supportive of the issuer in a manner that shows the utility has had a strong voice in the process. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility, should they occur including access to national courts, strong judicial precedent in the interpretation of utility laws, and a strong rule of law. We expect these conditions to continue. | Utility regulation occurs under a well developed national, state or provincial framework based on legislation that provides the utility a very strong monopoly (see note 1) within its service territory, an assurance, subject to reasonable prudency requirements, that rates will be set in a manner that will permit the utility to make and recover all necessary investments, a high degree of clarity as to the manner in which utilities will be regulated, and overall guidance for methods and procedures for setting rates. If there have been changes in utility legislation, they have been mostly timely and on the whole credit supportive for the issuer, and the utility has had a clear voice in the legislative process. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility, should they occur, including access to national courts, clear judicial precedent in the interpretation of utility law, and a strong rule of law. We expect these conditions to continue. | Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation that provides the utility a strong monopoly within its service territory that may have some exceptions such as greater self-generation (see note 1), a general assurance that, subject to prudency requirements that are mostly reasonable, rates will be set will be set in a manner that will permit the utility to make and recover all necessary investments, reasonable clarity as to the manner in which utilities will be regulated and overall guidance for methods and procedures for setting rates; or (ii) under a new framework where independent and transparent regulation exists in other sectors. If there have been changes in utility legislation, they have been credit supportive or at least balanced for the issuer but potentially less timely, and the utility had a voice in the legislative process. There is either (i) an independent judiciary that can arbitrate disagreements between the regulator and the utility, including access to courts at least at the state or provincial level, reasonably clear judicial precedent in the interpretation of utility laws, and a generally strong rule of law; or (ii) regulation has been applied (under a well developed framework) in a manner such that redress to an independent arbiter has not been required. We expect these conditions to continue. |

| Ba | B | Caa |
|---|---|---|
| Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility a monopoly within its service territory that is generally strong but may have a greater level of exceptions (see note 1), and that, subject to prudency requirements which may be stringent, provides a general assurance (with somewhat less certainty) that rates will be set will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where the jurisdiction has a history of less independent and transparent regulation in other sectors. Either: (i) the judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or may not be fully independent of the regulator or other political pressure, but there is a reasonably strong rule of law; or (ii) where there is no independent arbiter, the regulation has mostly been applied in a manner such redress has not been required. We expect these conditions to continue. | Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility monopoly within its service territory that is reasonably strong but may have important exceptions, and that, subject to prudency requirements which may be stringent or at times arbitrary, provides more limited or less certain assurance that rates will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where we would expect less independent and transparent regulation, based either on the regulator's history in other sectors or other factors. The judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or may not be fully independent of the regulator or other political pressure, but there is a reasonably strong rule of law. Alternately, where there is no independent arbiter, the regulation has been applied in a manner that often requires some redress adding more uncertainty to the regulatory framework. There may be a periodic risk of creditor-unfriendly government intervention in utility markets or rate-setting. | Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility a monopoly within its service territory, but with little assurance that rates will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where we would expect unpredictable or adverse regulation, based either on the jurisdiction's history of in other sectors or other factors. The judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or is viewed as not being fully independent of the regulator or other political pressure. Alternately, there may be no redress to an effective independent arbiter. The ability of the utility to enforce its monopoly or prevent uncompensated usage of its system may be limited. There may be a risk of creditor-unfriendly nationalization or other significant intervention in utility markets or rate-setting. |

Note 1: The strength of the monopoly refers to the legal, regulatory and practical obstacles for customers in the utility's territory to obtain service from another provider. Examples of a weakening of the monopoly would include the ability of a city or large user to leave the utility system to set up their own system, the extent to which self-generation is permitted (e.g. cogeneration) and/or encouraged (e.g., net metering, DSM generation). At the lower end of the ratings spectrum, the utility's monopoly may be challenged by pervasive theft and unauthorized use. Since utilities are generally presumed to be monopolies, a strong monopoly position in itself is not sufficient for a strong score in this sub-factor, but a weakening of the monopoly can lower the score.

How We Assess Consistency and Predictability of Regulation for the Grid

For the Consistency and Predictability sub-factor, we consider the track record of regulatory decisions in terms of consistency, predictability and supportiveness. We evaluate the utility's interactions in the regulatory process as well as the overall stance of the regulator toward the utility.

In most jurisdictions, the laws and rules seek to make rate-setting a primarily technical process that examines costs the utility incurs and the returns on investments the utility needs to earn so it can make investments that are required to build and maintain the utility infrastructure - power plants, electric transmission and distribution systems, and/or natural gas distribution systems. When the process remains technical and transparent such that regulators can support the financial health of the utility while balancing their public duty to assure that reliable service is provided at a reasonable cost, and when the utility is able to align itself with the policy initiatives of the governing jurisdiction, the utility will receive higher scores in this sub-factor. When the process includes substantial political intervention, which could take the form of legislators or other government officials publically second- guessing regulators, dismissing regulators who have approved unpopular rate increases, or preventing the implementation of rate increases, or when regulators ignore the laws/rules to deliver an outcome that appears more politically motivated, the utility will receive lower scores in this sub-factor.

As with the prior sub-factor, we may score different utilities in the same jurisdiction differently, based on outcomes that are more or less supportive of credit quality over a period of time. We have observed that some utilities are better able to meet the expectations of their customers and regulators, whether through better service, greater reliability, more stable rates or simply more effective regulatory outreach and communication. These utilities typically receive more consistent and credit supportive outcomes, so they will score higher in this sub-factor. Conversely, if a utility has multiple rapid rate increases, chooses to submit major rate increase requests during a sensitive election cycle or a severe economic downturn, has chronic customer service issues, is viewed as frequently providing incomplete information to regulators, or is tone deaf to the priorities of regulators and politicians, it may receive less consistent and supportive outcomes and thus score lower in this sub-factor.

In scoring this sub-factor, we will primarily evaluate the actions of regulators, politicians and jurists rather than their words. Nonetheless, words matter when they are an indication of future action. We seek to differentiate between political rhetoric that is perhaps oriented toward gaining attention for the viewpoint of the speaker and rhetoric that is indicative of future actions and trends in decision- making.

**Factor 1b: Consistency and Predictability of Regulation (12.5%)**

| Aaa | Aa | A | Baa |
|---|---|---|---|
| The issuer's interaction with the regulator has led to a strong, lengthy track record of predictable, consistent and favorable decisions. The regulator is highly credit supportive of the issuer and utilities in general. We expect these conditions to continue. | The issuer's interaction with the regulator has a led to a considerable track record of predominantly predictable and consistent decisions. The regulator is mostly credit supportive of utilities in general and in almost all instances has been highly credit supportive of the issuer. We expect these conditions to continue. | The issuer's interaction with the regulator has led to a track record of largely predictable and consistent decisions. The regulator may be somewhat less credit supportive of utilities in general, but has been quite credit supportive of the issuer in most circumstances. We expect these conditions to continue. | The issuer's interaction with the regulator has led to an adequate track record. The regulator is generally consistent and predictable, but there may some evidence of inconsistency or unpredictability from time to time, or decisions may at times be politically charged. However, instances of less credit supportive decisions are based on reasonable application of existing rules and statutes and are not overly punitive. We expect these conditions to continue. |

| Ba | B | Caa |
|---|---|---|
| We expect that regulatory decisions will demonstrate considerable inconsistency or unpredictability or that decisions will be politically charged, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. The regulator may have a history of less credit supportive regulatory decisions with respect to the issuer, but we expect that the issuer will be able to obtain support when it encounters financial stress, with some potentially material delays. The regulator's authority may be eroded at times by legislative or political action. The regulator may not follow the framework for some material decisions. | We expect that regulatory decisions will be largely unpredictable or even somewhat arbitrary, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. However, we expect that the issuer will ultimately be able to obtain support when it encounters financial stress, albeit with material or more extended delays. Alternately, the regulator is untested, lacks a consistent track record, or is undergoing substantial change. The regulator's authority may be eroded on frequent occasions by legislative or political action. The regulator may more frequently ignore the framework in a manner detrimental to the issuer. | We expect that regulatory decisions will be highly unpredictable and frequently adverse, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction.<br>Alternately, decisions may have credit supportive aspects, but may often be unenforceable. The regulator's authority may have been seriously eroded by legislative or political action. The regulator may consistently ignore the framework to the detriment of the issuer. |

## Factor 2: Ability to Recover Costs and Earn Returns (25%)

Why It Matters

This rating factor examines the ability of a utility to recover its costs and earn a return over a period of time, including during differing market and economic conditions. While the Regulatory Framework looks at the transparency and predictability of the rules that govern the decision-making process with respect to utilities, the Ability to Recover Costs and Earn Returns evaluates the regulatory elements that directly impact the ability of the utility to generate cash flow and service its debt over time. The ability to recover prudently incurred costs on a timely basis and to attract debt and equity capital are crucial credit considerations. The inability to recover costs, for instance if fuel or purchased power costs ballooned during a rate freeze period, has been one of the greatest drivers of financial stress in this sector, as well as the cause of some utility defaults. In a sector that is typically free cash flow negative (due to large capital expenditures and dividends) and that routinely needs to refinance very large maturities of long-term debt, investor concerns about a lack of timely cost recovery or the sufficiency of rates can, in an extreme scenario, strain access to capital markets and potentially lead to insolvency of the utility (as was the case when "used and useful" requirements threatened some utilities that experienced years of delay in completing nuclear power plants in the 1980s). While our scoring for the Ability to Recover Costs and Earn Returns may primarily be influenced by our assessment of the regulatory relationship, it can also be highly impacted by the management and business decisions of the utility.

How We Assess Ability to Recover Costs and Earn Returns

The timeliness and sufficiency of rates are scored as separate sub-factors; however, they are interrelated. Timeliness can have an impact on our view of what constitutes sufficient returns, because a strong assurance of timely cost recovery reduces risk. Conversely, utilities may have a strong assurance that they will earn a full return on certain deferred costs until they are able to collect them, or their generally strong returns may allow them to weather some rate lag on recovery of construction-related capital expenditures. The timeliness of cost recovery is particularly important in a period of rapidly rising costs. During the past five years, utilities have benefitted from low interest rates and generally decreasing fuel costs and purchased power costs, but these market conditions could easily reverse. For example, fuel is a large component of total costs for vertically integrated utilities and for natural gas utilities, and fuel prices are highly volatile, so the timeliness of fuel and purchased power cost recovery is especially important.

While Factors 1 and 2 are closely inter-related, scoring of these factors will not necessarily be the same. We have observed jurisdictions where the Regulatory Framework caused considerable credit concerns – perhaps it was untested or going through a transition to de-regulation, but where the track record of rate case outcomes was quite positive, leading to a higher score in the Ability to Recover Costs and Earn Returns. Conversely, there have been instances of strong Legislative and Judicial Underpinnings of the Regulatory Framework where the commission has ignored the framework (which would affect Consistency and Predictability of Regulation as well as Ability to Recover Costs and Earn Returns) or has used extraordinary measures to prevent or defer an increase that might have been justifiable from a cost perspective but would have caused rate shock.

One might surmise that Factors 2 and 4 should be strongly correlated, since a good Ability to Recover Costs and Earn Returns would normally lead to good financial metrics. However, the scoring for the Ability to Recover Costs and Earn Returns sub-factor places more emphasis on our expectation of timeliness and sufficiency of rates over time; whereas financial metrics may be impacted by one-time events, market conditions or construction cycles - trends that we believe could normalize or even reverse.

How We Assess Timeliness of Recovery of Operating and Capital Costs for the Grid

The criteria we consider include provisions and cost recovery mechanisms for operating costs, mechanisms that allow actual operating and/or capital expenditures to be trued-up periodically into rates without having to file a rate case (this may include formula rates, rider and trackers, or the ability to periodically adjust rates for construction work in progress) as well as the process and timeframe of general tariff/base rate cases – those that are fully reviewed by the regulator, generally in a public format that includes testimony of the utility and other stakeholders and interest groups. We also look at the track record of the utility and regulator for timeliness. For instance, having a formula rate plan is positive, but if the actual process has included reviews that are delayed for long periods, it may dampen the benefit to the utility. In addition, we seek to estimate the lag between the time that a utility incurs a major construction expenditures and the time that the utility will start to recover and/or earn a return on that expenditure.

How We Assess Sufficiency of Rates and Returns for the Grid

The criteria we consider include statutory protections that assure full cost recovery and a reasonable return for the utility on its investments, the regulatory mechanisms used to determine what a reasonable return should be, and the track record of the utility in actually recovering costs and earning returns. We examine outcomes of rate cases/tariff reviews and compare them to the request submitted by the utility, to prior rate cases/tariff reviews for the same utility and to recent rate/tariff decisions for a peer group of comparable utilities. In this context, comparable utilities are typically utilities in the same or similar jurisdiction. In cases where the utility is unique or nearly unique in its jurisdiction, comparison will be made to other peers with an adjustment for local differences, including prevailing rates of interest and returns on capital, as well as the timeliness of rate-setting. We look at regulatory disallowances of costs or investments, with a focus on their financial severity and also on the reasons given by the regulator, in order to assess the likelihood that such disallowances will be repeated in the future.

**Factor 2a: Timeliness of Recovery of Operating and Capital Costs (12.5%)**

| Aaa | Aa | A | Baa |
|---|---|---|---|
| Tariff formulas and automatic cost recovery mechanisms provide full and highly timely recovery of all operating costs and essentially contemporaneous return on all incremental capital investments, with statutory provisions in place to preclude the possibility of challenges to rate increases or cost recovery mechanisms. By statute and by practice, general rate cases are efficient, focused on an impartial review, quick, and permit inclusion of fully forward-looking costs. | Tariff formulas and automatic cost recovery mechanisms provide full and highly timely recovery of all operating costs and essentially contemporaneous or near-contemporaneous return on most incremental capital investments, with minimal challenges by regulators to companies' cost assumptions. By statute and by practice, general rate cases are efficient, focused on an impartial review, of a very reasonable duration before non-appealable interim rates can be collected, and primarily permit inclusion of forward-looking costs. | Automatic cost recovery mechanisms provide full and reasonably timely recovery of fuel, purchased power and all other highly variable operating expenses. Material capital investments may be made under tariff formulas or other rate-making permitting reasonably contemporaneous returns, or may be submitted under other types of filings that provide recovery of cost of capital with minimal delays. Instances of regulatory challenges that delay rate increases or cost recovery are generally related to large, unexpected increases in sizeable construction projects. By statute or by practice, general rate cases are reasonably efficient, primarily focused on an impartial review, of a reasonable duration before rates (either permanent or non-refundable interim rates) can be collected, and permit inclusion of important forward-looking costs. | Fuel, purchased power and all other highly variable expenses are generally recovered through mechanisms incorporating delays of less than one year, although some rapid increases in costs may be delayed longer where such deferrals do not place financial stress on the utility. Incremental capital investments may be recovered primarily through general rate cases with moderate lag, with some through tariff formulas. Alternately, there may be formula rates that are untested or unclear. Potentially greater tendency for delays due to regulatory intervention, although this will generally be limited to rates related to large capital projects or rapid increases in operating costs. |
| **Ba** | **B** | **Caa** | |
| There is an expectation that fuel, purchased power or other highly variable expenses will eventually be recovered with delays that will not place material financial stress on the utility, but there may be some evidence of an unwillingness by regulators to make timely rate changes to address volatility in fuel, or purchased power, or other market-sensitive expenses. Recovery of costs related to capital investments may be subject to delays that are somewhat lengthy, but not so pervasive as to be expected to discourage important investments. | The expectation that fuel, purchased power or other highly variable expenses will be recovered may be subject to material delays due to second-guessing of spending decisions by regulators or due to political intervention. Recovery of costs related to capital investments may be subject to delays that are material to the issuer, or may be likely to discourage some important investment. | The expectation that fuel, purchased power or other highly variable expenses will be recovered may be subject to extensive delays due to second-guessing of spending decisions by regulators or due to political intervention.<br>Recovery of costs related to capital investments may be uncertain, subject to delays that are extensive, or that may be likely to discourage even necessary investment. | |

Note: Tariff formulas include formula rate plans as well as trackers and riders related to capital investment.

**Factor 2b: Sufficiency of Rates and Returns (12.5%)**

| Aaa | Aa | A | Baa |
|---|---|---|---|
| Sufficiency of rates to cover costs and attract capital is (and will continue to be) unquestioned. | Rates are (and we expect will continue to be) set at a level that permits full cost recovery and a fair return on all investments, with minimal challenges by regulators to companies' cost assumptions. This will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are strong relative to global peers. | Rates are (and we expect will continue to be) set at a level that generally provides full cost recovery and a fair return on investments, with limited instances of regulatory challenges and disallowances. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are generally above average relative to global peers, but may at times be average. | Rates are (and we expect will continue to be) set at a level that generally provides full operating cost recovery and a mostly fair return on investments, but there may be somewhat more instances of regulatory challenges and disallowances, although ultimate rate outcomes are sufficient to attract capital without difficulty. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are average relative to global peers, but may at times be somewhat below average. |

| Ba | B | Caa |
|---|---|---|
| Rates are (and we expect will continue to be) set at a level that generally provides recovery of most operating costs but return on investments may be less predictable, and there may be decidedly more instances of regulatory challenges and disallowances, but ultimate rate outcomes are generally sufficient to attract capital. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are generally below average relative to global peers, or where allowed returns are average but difficult to earn. Alternately, the tariff formula may not take into account all cost components and/or remuneration of investments may be unclear or at times unfavorable. | We expect rates will be set at a level that at times fails to provide recovery of costs other than cash costs, and regulators may engage in somewhat arbitrary second-guessing of spending decisions or deny rate increases related to funding ongoing operations based much more on politics than on prudency reviews. Return on investments may be set at levels that discourage investment. We expect that rate outcomes may be difficult or uncertain, negatively affecting continued access to capital. Alternately, the tariff formula may fail to take into account significant cost components other than cash costs, and/or remuneration of investments may be generally unfavorable. | We expect rates will be set at a level that often fails to provide recovery of material costs, and recovery of cash costs may also be at risk.<br>Regulators may engage in more arbitrary second-guessing of spending decisions or deny rate increases related to funding ongoing operations based primarily on politics. Return on investments may be set at levels that discourage necessary maintenance investment. We expect that rate outcomes may often be punitive or highly uncertain, with a markedly negative impact on access to capital. Alternately, the tariff formula may fail to take into account significant cash cost components, and/or remuneration of investments may be primarily unfavorable. |

## Factor 3: Diversification (10%)

Why It Matters

Diversification of overall business operations helps to mitigate the risk that economic cycles, material changes in a single regulatory regime or commodity price movements will have a severe impact on cash flow and credit quality of a utility. While utilities' sales volumes have lower exposure to economic recessions than many non-financial corporate issuers, some sales components, including industrial sales, are directly affected by economic trends that cause lower production and/or plant closures. In addition, economic activity plays a role in the rate of customer growth in the service territory and (absent energy efficiency and conservation) can often impact usage per customer. The economic strength or weakness of the service territory can affect the political and regulatory environment for rate increase requests by the utility. For utilities in areas prone to severe storms and other natural disasters, the utility's geographic diversity or concentration can be a key determinant for creditworthiness.

Diversity among regulatory regimes can mitigate the impact of a single unfavorable decision affecting one part of the utility's footprint.

For utilities with electric generation, fuel source diversity can mitigate the impact (to the utility and to its rate-payers) of changes in commodity prices, hydrology and water flow, and environmental or other regulations affecting plant operations and economics. We have observed that utilities' regulatory environments are most likely to become unfavorable during periods of rapid rate increases (which are more important than absolute rate levels) and that fuel diversity leads to more stable rates over time.

For that reason, fuel diversity can be important even if fuel and purchased power expenses are an automatic pass-through to the utility's ratepayers. Changes in environmental, safety and other regulations have caused vulnerabilities for certain technologies and fuel sources during the past five years. These vulnerabilities have varied widely in different countries and have changed over time.

How We Assess Market Position for the Grid

Market position is comprised primarily of the economic diversity of the utility's service territory and the diversity of its regulatory regimes. We also consider the diversity of utility operations (e.g., regulated electric, gas, water, steam) when there are material operations in more than one area.

Economic diversity is a typically a function of the population, size and breadth of the territory and the businesses that drive its GDP and employment. For the size of the territory, we typically consider the number of customers and the volumes of generation and/or throughput. For breadth, we consider the number of sizeable metropolitan areas served, the economic diversity and vitality in those metropolitan areas, and any concentration in a particular area or industry. In our assessment, we may consider various information sources. For example, in the US, information sources on the diversity and vitality of economies of individual states and metropolitan areas may include Moody's Economy.com. We also look at the mix of the utility's sales volumes among customer types, as well as the track record of volume sales and any notable payment patterns during economic cycles. For diversity of regulatory regimes, we typically look at the number of regulators and the percentages of revenues and utility assets that are under the purview of each. While the highest scores in the Market Position sub-factor are reserved for issuers regulated in multiple jurisdictions, when there is only one regulator, we make a differentiation of regimes perceived as having lower or higher volatility.

Issuers with multiple supportive regulatory jurisdictions, a balanced sales mix among residential, commercial, industrial and governmental customers in a large service territory with a robust and diverse economy will generally score higher in this sub-factor. An issuer with a small service territory economy that

has a high dependence on one or two sectors, especially highly cyclical industries, will generally score lower in this sub-factor, as will issuers with meaningful exposure to economic dislocations caused by natural disasters.

For issuers that are vertically integrated utilities having a meaningful amount of generation, this sub- factor has a weighting of 5%. For electric transmission and distribution utilities without meaningful generation and for natural gas local distribution companies, this sub-factor has a weighting of 10%.

How We Assess Generation and Fuel Diversity for the Grid

Criteria include the fuel type of the issuer's generation and important power purchase agreements, the ability of the issuer economically to shift its generation and power purchases when there are changes in fuel prices, the degree to which the utility and its rate-payers are exposed to or insulated from changes in commodity prices, and exposure to Challenged Source and Threatened Sources (see the explanations for how we generally characterize these generation sources in the table below). A regulated utility's capacity mix may not in itself be an indication of fuel diversity or the ability to shift fuels, since utilities may keep old and inefficient plants (e.g., natural gas boilers) to serve peak load. For this reason, we do not incorporate set percentages reflecting an "ideal" or "sub-par" mix for capacity or even generation. In addition to looking at a utility's generation mix to evaluate fuel diversity, we consider the efficiency of the utility's plants, their placement on the regional dispatch curve, and the demonstrated ability/inability of the utility to shift its generation mix in accordance with changing commodity prices.

Issuers having a balanced mix of hydro, coal, natural gas, nuclear and renewable energy as well as low exposure to challenged and threatened sources of generation will score more highly in this sub-factor. Issuers that have concentration in one or two sources of generation, especially if they are threatened or challenged sources, will incur lower scores.

In evaluating an issuer's degree of exposure to challenged and threatened sources, we will consider not only the existence of those plants in the utility's portfolio, but also the relevant factors that will determine the impact on the utility and on its rate-payers. For instance, an issuer that has a fairly high percentage of its generation from challenged sources could be evaluated very differently if its peer utilities face the same magnitude of those issues than if its peers have no exposure to challenged or threatened sources. In evaluating threatened sources, we consider the utility's progress in its plan to replace those sources, its reserve margin, the availability of purchased power capacity in the region, and the overall impact of the replacement plan on the issuer's rates relative to its peer group. Especially if there are no peers in the same jurisdiction, we also examine the extent to which the utility's generation resources plan is aligned with the relevant government's fuel/energy policy.

## Factor 3: Diversification (10%)

| Weighting 10% | Sub-Factor Weighting | Aaa | Aa | A | Baa |
|---|---|---|---|---|---|
| Market Position | 5.00% * | A very high degree of multinational and regional diversity in terms of regulatory regimes and/or service territory economies. | Material operations in three or more nations or substantial geographic regions providing very good diversity of regulatory regimes and/or service territory economies. | Material operations in two to three nations, states, provinces or regions that provide good diversity of regulatory regimes and service territory economies. Alternately, operates within a single regulatory regime with low volatility, and the service territory economy is robust, has a very high degree of diversity and has demonstrated resilience in economic cycles. | May operate under a single regulatory regime viewed as having low volatility, or where multiple regulatory regimes are not viewed as providing much diversity. The service territory economy may have some concentration and cyclicality, but is sufficiently resilient that it can absorb reasonably foreseeable increases in utility rates. |
| Generation and Fuel Diversity | 5.00% ** | A high degree of diversity in terms of generation and/or fuel sources such that the utility and rate-payers are well insulated from commodity price changes, no generation concentration, and very low exposures to Challenged or Threatened Sources (see definitions below). | Very good diversification in terms of generation and/or fuel sources such that the utility and rate-payers are affected only minimally by commodity price changes, little generation concentration, and low exposures to Challenged or Threatened Sources. | Good diversification in terms of generation and/or fuel sources such that the utility and rate-payers have only modest exposure to commodity price changes; however, may have some concentration in a source that is neither Challenged nor Threatened. Exposure to Threatened Sources is low. While there may be some exposure to Challenged Sources, it is not a cause for concern. | Adequate diversification in terms of generation and/or fuel sources such that the utility and rate-payers have moderate exposure to commodity price changes; however, may have some concentration in a source that is Challenged. Exposure to Threatened Sources is moderate, while exposure to Challenged Sources is manageable. |

| | Sub-Factor Weighting | Ba | B | Caa | Definiitons |
|---|---|---|---|---|---|
| Market Position | 5.00% * | Operates in a market area with somewhat greater concentration and cyclicality in the service territory economy and/or exposure to storms and other natural disasters, and thus less resilience to absorbing reasonably foreseeable increases in utility rates. May show somewhat greater volatility in the regulatory regime(s). | Operates in a limited market area with material concentration and more severe cyclicality in service territory economy such that cycles are of materially longer duration or reasonably foreseeable increases in utility rates could present a material challenge to the economy. Service territory may have geographic concentration that limits its resilience to storms and other natural disasters, or may be an emerging market. May show decided volatility in the regulatory regime(s). | Operates in a concentrated economic service territory with pronounced concentration, macroeconomic risk factors, and/or exposure to natural disasters. | Challenged Sources are generation plants that face higher but not insurmountable economic hurdles resulting from penalties or taxes on their operation, or from environmental upgrades that are required or likely to be required. Some examples are carbon-emitting plants that incur carbon taxes, plants that must buy emissions credits to operate, and plants that must install environmental equipment to continue to operate, in each where the taxes/credits/upgrades are sufficient to have a material impact on those plants' competitiveness relative to other generation types or on the utility's rates, but where the impact is not so severe as to be likely require plant closure. |

| | | | | | |
|---|---|---|---|---|---|
| Generation and Fuel Diversity | 5.00% ** | Modest diversification in generation and/or fuel sources such that the utility or rate-payers have greater exposure to commodity price changes. Exposure to Challenged and Threatened Sources may be more pronounced, but the utility will be able to access alternative sources without undue financial stress. | Operates with little diversification in generation and/or fuel sources such that the utility or rate-payers have high exposure to commodity price changes. Exposure to Challenged and Threatened Sources may be high, and accessing alternate sources may be challenging and cause more financial stress, but ultimately feasible. | Operates with high concentration in generation and/or fuel sources such that the utility or rate-payers have exposure to commodity price shocks. Exposure to Challenged and Threatened Sources may be very high, and accessing alternate sources may be highly uncertain. | Threatened Sources are generation plants that are not currently able to operate due to major unplanned outages or issues with licensing or other regulatory compliance, and plants that are highly likely to be required to de-activate, whether due to the effectiveness of currently existing or expected rules and regulations or due to economic challenges. Some recent examples would include coal fired plants in the US that are not economic to retro-fit to meet mercury and air toxics standards, plants that cannot meet the effective date of those standards, nuclear plants in Japan that have not been licensed to re-start after the Fukushima Dai-ichi accident, and nuclear plants that are required to be phased out within 10 years (as is the case in some European countries). |

* 10% weight for issuers that lack generation **0% weight for issuers that lack generation

## Factor 4: Financial Strength (40%)

Why It Matters

Electric and gas utilities are regulated, asset-based businesses characterized by large investments in long-lived property, plant and equipment. Financial strength, including the ability to service debt and provide a return to shareholders, is necessary for a utility to attract capital at a reasonable cost in order to invest in its generation, transmission and distribution assets, so that the utility can fulfill its service obligations at a reasonable cost to rate-payers.

How We Assess It for the Grid

In comparison to companies in other non-financial corporate sectors, the financial statements of regulated electric and gas utilities have certain unique aspects that impact financial analysis, which is further complicated by disparate treatment of certain elements under US Generally Accepted Accounting Principles (GAAP) versus International Financial Reporting Standards (IFRS). Regulatory accounting may permit utilities to defer certain costs (thereby creating regulatory assets) that a non- utility corporate entity would have to expense. For instance, a regulated utility may be able to defer a substantial portion of costs related to recovery from a storm based on the general regulatory framework for those expenses, even if the utility does not have a specific order to collect the expenses from ratepayers over a set period of time. A regulated utility may be able to accrue and defer a return on equity (in addition to capitalizing interest) for construction-work-in-progress for an approved project based on the assumption that it will be able to collect that deferred equity return once the asset comes into service. For this reason, we focus more on a utility's cash flow than on its reported net income.

Conversely, utilities may collect certain costs in rates well ahead of the time they must be paid (for instance, pension costs), thereby creating regulatory liabilities. Many of our metrics focus on Cash Flow from Operations Before Changes in Working Capital (CFO Pre-WC) because, unlike Funds from Operations (FFO), it captures the changes in long-term regulatory assets and liabilities.

However, under IFRS the two measures are essentially the same. In general, we view changes in working capital as less important in utility financial analysis because they are often either seasonal (for example, power demand is generally greatest in the summer) or caused by changes in fuel prices that are typically a relatively automatic pass-through to the customer. We will nonetheless examine the impact of working capital changes in analyzing a utility's liquidity (see Other Rating Considerations – Liquidity).

Given the long-term nature of utility assets and the often lumpy nature of their capital expenditures, it is important to analyze both a utility's historical financial performance as well as its prospective future performance, which may be different from backward-looking measures. Scores under this factor may be higher or lower than what might be expected from historical results, depending on our view of expected future performance. Multi-year periods are usually more representative of credit quality because utilities can experience swings in cash flows from one-time events, including such items as rate refunds, storm cost deferrals that create a regulatory asset, or securitization proceeds that reduce a regulatory asset. Nonetheless, we also look at trends in metrics for individual periods, which may influence our view of future performance and ratings.

For this scoring grid, we have identified four key ratios that we consider the most consistently useful in the analysis of regulated electric and gas utilities. However, no single financial ratio can adequately convey the relative credit strength of these highly diverse companies. Our ratings consider the overall financial strength of a company, and in individual cases other financial indicators may also play an important role.

*CFO Pre-Working Capital Plus Interest/Interest or Cash Flow Interest Coverage*

The cash flow interest coverage ratio is an indicator for a utility's ability to cover the cost of its borrowed capital. The numerator in the ratio calculation is the sum of CFO Pre-WC and interest expense, and the denominator is interest expense.

*CFO Pre-Working Capital / Debt*

This important metric is an indicator for the cash generating ability of a utility compared to its total debt. The numerator in the ratio calculation is CFO Pre-WC, and the denominator is total debt.

*CFO Pre-Working Capital Minus Dividends / Debt*

This ratio is an indicator for financial leverage as well as an indicator of the strength of a utility's cash flow after dividend payments are made. Dividend obligations of utilities are often substantial, quasi- permanent outflows that can affect the ability of a utility to cover its debt obligations, and this ratio can also provide insight into the financial policies of a utility or utility holding company. The higher the level of retained cash flow relative to a utility's debt, the more cash the utility has to support its capital expenditure program. The numerator of this ratio is CFO Pre-WC minus dividends, and the denominator is total debt.

*Debt/Capitalization*

This ratio is a traditional measure of balance sheet leverage. The numerator is total debt and the denominator is total capitalization. All of our ratios are calculated in accordance with our standard adjustments[10], but we note that our definition of total capitalization includes deferred taxes in addition to total debt, preferred stock, other hybrid securities, and common equity. Since the presence or absence of deferred taxes is a function of national tax policy, comparing utilities using this ratio may be more meaningful among utilities in the same country or in countries with similar tax policies. High debt levels in comparison to capitalization can indicate higher interest obligations, can limit the ability of a utility to raise additional financing if needed, and can lead to leverage covenant violations in bank credit facilities or other financing agreements[11]. A high ratio may result from a regulatory framework that does not permit a robust cushion of equity in the capital structure, or from a material write-off of an asset, which may not have impacted current period cash flows but could affect future period cash flows relative to debt.

There are two sets of thresholds for three of these ratios based on the level of the issuer's business risk – the Standard Grid and the Lower Business Risk (LBR) Grid. In our view, the different types of utility entities covered under this methodology (as described in Appendix E) have different levels of business risk.

Generation utilities and vertically integrated utilities generally have a higher level of business risk because they are engaged in power generation, so we apply the Standard Grid. We view power generation as the highest-risk component of the electric utility business, as generation plants are typically the most expensive part of a utility's infrastructure (representing asset concentration risk) and are subject to the greatest risks in both construction and operation, including the risk that incurred costs will either not be recovered in rates or recovered with material delays.

Other types of utilities may have lower business risk, such that we believe that they are most appropriately assessed using the LBR Grid, due to factors that could include a generally greater transfer of risk to customers, very strong insulation from exposure to commodity price movements, good protection from volumetric risks, fairly limited capex needs and low exposure to storms, major accidents and natural

[10] In certain circumstances, analysts may also apply specific adjustments.

[11] We also examine debt/capitalization ratios as defined in applicable covenants (which typically exclude deferred taxes from capitalization) relative to the covenant threshold level.

disasters. For instance, we tend to view many US natural gas local distribution companies (LDCs) and certain US electric transmission and distribution companies (T&Ds, which lack generation but generally retain some procurement responsibilities for customers), as typically having a lower business risk profile than their vertically integrated peers. In cases of T&Ds that we do not view as having materially lower risk than their vertically integrated peers, we will apply the Standard grid. This could result from a regulatory framework that exposes them to energy supply risk, large capital expenditures for required maintenance or upgrades, a heightened degree of exposure to catastrophic storm damage, or increased regulatory scrutiny due to poor reliability, or other considerations. The Standard Grid will also apply to LDCs that in our view do not have materially lower risk; for instance, due to their ownership of high pressure pipes or older systems requiring extensive gas main replacements, where gas commodity costs are not fully recovered in a reasonably contemporaneous manner, or where the LDC is not well insulated from declining volumes.

The four key ratios, their weighting in the grid, and the Standard and LBR scoring thresholds are detailed in the following table.

**Factor 4: Financial Strength**

| Weighting 40% | Sub-Factor Weighting | | Aaa | Aa | A | Baa | Ba | B | Caa |
|---|---|---|---|---|---|---|---|---|---|
| CFO pre-WC + Interest / Interest | 7.50% | | ≥ 8.0x | 6.0x - 8.0x | 4.5x - 6.0x | 3.0x - 4.5x | 2.0x - 3.0x | 1.0x - 2.0x | < 1.0x |
| CFO pre-WC / Debt | 15.00% | Standard Grid | ≥ 40% | 30% - 40% | 22% - 30% | 13% - 22% | 5% - 13% | 1% - 5% | < 1% |
| | | Low Business Risk Grid | ≥ 38% | 27% - 38% | 19% - 27% | 11% - 19% | 5% - 11% | 1% - 5% | < 1% |
| CFO pre-WC - Dividends / Debt | 10.00% | Standard Grid | ≥ 35% | 25% - 35% | 17% - 25% | 9% - 17% | 0% - 9% | (5%) - 0% | < (5%) |
| | | Low Business Risk Grid | ≥ 34% | 23% - 34% | 15% - 23% | 7% - 15% | 0% - 7% | (5%) - 0% | < (5%) |
| Debt / Capitalization | 7.50% | Standard Grid | < 25% | 25% - 35% | 35% - 45% | 45% - 55% | 55% - 65% | 65% - 75% | ≥ 75% |
| | | Low Business Risk Grid | < 29% | 29% - 40% | 40% - 50% | 50% - 59% | 59% - 67% | 67% - 75% | ≥ 75% |

## Notching for Structural Subordination of Holding Companies

### Why It Matters

A typical utility company structure consists of a holding company ("HoldCo") that owns one or more operating subsidiaries (each an "OpCo"). OpCos may be regulated utilities or non-utility companies. A HoldCo typically has no operations – its assets are mostly limited to its equity interests in subsidiaries, and potentially other investments in subsidiaries that are structured as advances, debt, or even hybrid securities.

Most HoldCos present their financial statements on a consolidated basis that blurs legal considerations about priority of creditors based on the legal structure of the family, and grid scoring is thus based on consolidated ratios. However, HoldCo creditors typically have a secondary claim on the group's cash flows and assets after OpCo creditors. We refer to this as structural subordination, because it is the corporate legal structure, rather than specific subordination provisions, that causes creditors at each of the utility and non-utility subsidiaries to have a more direct claim on the cash flows and assets of their respective OpCo obligors. By contrast, the debt of the HoldCo is typically serviced primarily by dividends that are up-

streamed by the OpCos[12]. Under normal circumstances, these dividends are made from net income, after payment of the OpCo's interest and preferred dividends. In most non- financial corporate sectors where cash often moves freely between the entities in a single issuer family, this distinction may have less of an impact. However, in the regulated utility sector, barriers to movement of cash among companies in the corporate family can be much more restrictive, depending on the regulatory framework. These barriers can lead to significantly different probabilities of default for HoldCos and OpCos. Structural subordination also affects loss given default. Under most default[13] scenarios, an OpCo's creditors will be satisfied from the value residing at that OpCo before any of the OpCo's assets can be used to satisfy claims of the HoldCo's creditors. The prevalence of debt issuance at the OpCo level is another reason that structural subordination is usually a more serious concern in the utility sector than for investment grade issuers in other non-financial corporate sectors.

The grids for factors 1-4 are primarily oriented to OpCos (and to some degree for HoldCos with minimal current structural subordination; for example, there is no current structural subordination to debt at the operating company if all of the utility family's debt and preferred stock is issued at the HoldCo level, although there is structural subordination to other liabilities at the OpCo level). The additional risk from structural subordination is addressed via a notching adjustment to bring grid outcomes (on average) closer to the actual ratings of HoldCos.

How We Assess It

Grid-indicated ratings of holding companies may be notched down based on structural subordination. The risk factors and mitigants that impact structural subordination are varied and can be present in different combinations, such that a formulaic approach is not practical and case-by-case analyst judgment of the interaction of all pertinent factors that may increase or decrease its importance to the credit risk of an issuer are essential.

Some of the potentially pertinent factors that could increase the degree and/or impact of structural subordination include the following:

» Regulatory or other barriers to cash movement from OpCos to HoldCo

» Specific ring-fencing provisions

» Strict financial covenants at the OpCo level

» Higher leverage at the OpCo level

» Higher leverage at the HoldCo level[14]

» Significant dividend limitations or potential limitations at an important OpCo

» HoldCo exposure to subsidiaries with high business risk or volatile cash flows

Strained liquidity at the HoldCo level

» The group's investment program is primarily in businesses that are higher risk or new to the group

Some of the potentially mitigating factors that could decrease the degree and/or impact of structural subordination include the following:

[12] The HoldCo and OpCo may also have intercompany agreements, including tax sharing agreements, that can be another source of cash to the HoldCo.

[13] Actual priority in a default scenario will be determined by many factors, including the corporate and bankruptcy laws of the jurisdiction, the asset value of each OpCo, specific financing terms, inter-relationships among members of the family, etc.

[14] While higher leverage at the HoldCo does not increase structural subordination per se, it exacerbates the impact of any structural subordination that exists

- Substantial diversity in cash flows from a variety of utility OpCos
- Meaningful dividends to HoldCo from unlevered utility OpCos
- Dependable, meaningful dividends to HoldCo from non-utility OpCos
- The group's investment program is primarily in strong utility businesses
- Inter-company guarantees - however, in many jurisdictions the value of an upstream guarantee may be limited by certain factors, including by the value that the OpCo received in exchange for granting the guarantee

Notching for structural subordination within the grid may range from 0 to negative 3 notches. Instances of extreme structural subordination are relatively rare, so the grid convention does not accommodate wider differences, although in the instances where we believe it is present, actual ratings do reflect the full impact of structural subordination.

A related issue is the relationship of ratings within a utility family with multiple operating companies, and sometimes intermediate holding companies. Some of the key issues are the same, such as the relative amounts of debt at the holding company level compared to the operating company level (or at one OpCo relative to another), and the degree to which operating companies have credit insulation due to regulation or other protective factors. Appendix B has additional insights on ratings within a utility family.

## Rating Methodology Assumptions, Limitations, and Other Rating Considerations

The grid in this rating methodology represents a decision to favor simplicity that enhances transparency and to avoid greater complexity that might enable the grid to map more closely to actual ratings. Accordingly, the four rating factors and the notching factor in the grid do not constitute an exhaustive treatment of all of the considerations that are important for ratings of companies in the regulated electric and gas utility sector. In addition, our ratings incorporate expectations for future performance, while the financial information that is used in the grid in this document is mainly historical. In some cases, our expectations for future performance may be informed by confidential information that we can't disclose. In other cases, we estimate future results based upon past performance, industry trends, competitor actions or other factors. In either case, predicting the future is subject to the risk of substantial inaccuracy.

Assumptions that may cause our forward-looking expectations to be incorrect include unanticipated changes in any of the following factors: the macroeconomic environment and general financial market conditions, industry competition, disruptive technology, regulatory and legal actions.

Key rating assumptions that apply in this sector include our view that sovereign credit risk is strongly correlated with that of other domestic issuers, that legal priority of claim affects average recovery on different classes of debt, sufficiently to generally warrant differences in ratings for different debt classes of the same issuer, and the assumption that lack of access to liquidity is a strong driver of credit risk.

In choosing metrics for this rating methodology grid, we did not explicitly include certain important factors that are common to all companies in any industry such as the quality and experience of management, assessments of corporate governance and the quality of financial reporting and information disclosure. Therefore ranking these factors by rating category in a grid would in some cases suggest too much precision in the relative ranking of particular issuers against all other issuers that are rated in various industry sectors.

Ratings may include additional factors that are difficult to quantify or that have a meaningful effect in differentiating credit quality only in some cases, but not all. Such factors include financial controls, exposure to uncertain licensing regimes and possible government interference in some countries.

Regulatory, litigation, liquidity, technology and reputational risk as well as changes to consumer and business spending patterns, competitor strategies and macroeconomic trends also affect ratings. While these are important considerations, it is not possible precisely to express these in the rating methodology grid without making the grid excessively complex and significantly less transparent.

Ratings may also reflect circumstances in which the weighting of a particular factor will be substantially different from the weighting suggested by the grid.

This variation in weighting rating considerations can also apply to factors that we choose not to represent in the grid. For example, liquidity is a consideration frequently critical to ratings and which may not, in other circumstances, have a substantial impact in discriminating between two issuers with a similar credit profile. As an example of the limitations, ratings can be heavily affected by extremely weak liquidity that magnifies default risk. However, two identical companies might be rated the same if their only differentiating feature is that one has a good liquidity position while the other has an extremely good liquidity position.

## Other Rating Considerations

We consider other factors in addition to those discussed in this report, but in most cases understanding the considerations discussed herein should enable a good approximation of our view on the credit quality of companies in the regulated electric and gas utilities sector. Ratings consider our assessment of the quality of management, corporate governance, financial controls, liquidity management, event risk and seasonality. The analysis of these factors remains an integral part of our rating process.

## Liquidity and Access to Capital Markets

Liquidity analysis is a key element in the financial analysis of electric and gas utilities, and it encompasses a company's ability to generate cash from internal sources as well as the availability of external sources of financing to supplement these internal sources. Liquidity and access to financing are of particular importance in this sector. Utility assets can often have a very long useful life- 30, 40 or even 60 years is not uncommon, as well as high price tags. Partly as a result of construction cycles, the utility sector has experienced prolonged periods of negative free cash flow – essentially, the sum of its dividends and its capital expenditures for maintenance and growth of its infrastructure frequently exceeds cash from operations, such that a portion of capital expenditures must routinely be debt financed. Utilities are among the largest debt issuers in the corporate universe and typically require consistent access to the capital markets to assure adequate sources of funding and to maintain financial flexibility. Substantial portions of capex are non-discretionary (for example, maintenance, adding customers to the network, or meeting environmental mandates); however, utilities were swift to cut or defer discretionary spending during the 2007-2009 recession. Dividends represent a quasi-permanent outlay, since utilities typically only rarely will cut their dividend. Liquidity is also important to meet maturing obligations, which often occur in large chunks, and to meet collateral calls under any hedging agreements.

Due to the importance of liquidity, incorporating it as a factor with a fixed weighting in the grid would suggest an importance level that is often far different from the actual weight in the rating. In normal circumstances most companies in the sector have good access to liquidity. The industry generally requires, and for the most part has, large, syndicated, multi-year committed credit facilities. In addition, utilities have demonstrated strong access to capital markets, even under difficult conditions. As a result, liquidity

generally has not been an issue for most utilities and a utility with very strong liquidity may not warrant a rating distinction compared to a utility with strong liquidity. However, when there is weakness in liquidity or liquidity management, it can be the dominant consideration for ratings.

Our assessment of liquidity for regulated utilities involves an analysis of total sources and uses of cash over the next 12 months or more, as is done for all corporates. Using our financial projections of the utility and our analysis of its available sources of liquidity (including an assessment of the quality and reliability of alternate liquidity such as committed credit facilities), we evaluate how its projected sources of cash (cash from operations, cash on hand and existing committed multi-year credit facilities) compare to its projected uses (including all or most capital expenditures, dividends, maturities of short and long-term debt, our projection of potential liquidity calls on financial hedges, and important issuer-specific items such as special tax payments). We assume no access to capital markets or additional liquidity sources, no renewal of existing credit facilities, and no cut to dividends. We examine a company's liquidity profile under this scenario, its ability to make adjustments to improve its liquidity position, and any dependence on liquidity sources with lower quality and reliability.

## Management Quality and Financial Policy

The quality of management is an important factor supporting the credit strength of a regulated utility or utility holding company. Assessing the execution of business plans over time can be helpful in assessing management's business strategies, policies, and philosophies and in evaluating management performance relative to performance of competitors and our projections. A record of consistency provides us with insight into management's likely future performance in stressed situations and can be an indicator of management's tendency to depart significantly from its stated plans and guidelines.

We also assess financial policy (including dividend policy and planned capital expenditures) and how management balances the potentially competing interests of shareholders, fixed income investors and other stakeholders. Dividends and discretionary capital expenditures are the two primary components over which management has the greatest control in the short term. For holding companies, we consider the extent to which management is willing stretch its payout ratio (through aggressive increases or delays in needed decreases) in order to satisfy common shareholders. For a utility that is a subsidiary of a parent company with several utility subsidiaries, dividends to the parent may be more volatile depending on the cash generation and cash needs of that utility, because parents typically want to assure that each utility maintains the regulatory debt/equity ratio on which its rates have been set. The effect we have observed is that utility subsidiaries often pay higher dividends when they have lower capital needs and lower dividends when they have higher capital expenditures or other cash needs. Any dividend policy that cuts into the regulatory debt/equity ratio is a material credit negative.

## Size – Natural Disasters, Customer Concentration and Construction Risks

The size and scale of a regulated utility has generally not been a major determinant of its credit strength in the same way that it has been for most other industrial sectors. While size brings certain economies of scale that can somewhat affect the utility's cost structure and competitiveness, rates are more heavily impacted by costs related to fuel and fixed assets. Particularly in the US, we have not observed material differences in the success of utilities' regulatory outreach based on their size. Smaller utilities have sometimes been better able to focus their attention on meeting the expectations of a single regulator than their multi-state peers.

However, size can be a very important factor in our assessment of certain risks that impact ratings, including exposure to natural disasters, customer concentration (primarily to industrial customers in a single sector) and construction risks associated with large projects. While the grid attempts to incorporate the first two of

these into Factor 3, for some issuers these considerations may be sufficiently important that the rating reflects a greater weight for these risks. While construction projects always carry the risk of cost over-runs and delays, these risks are materially heightened for projects that are very large relative to the size of the utility.

### Interaction of Utility Ratings with Government Policies and Sovereign Ratings

Compared to most industrial sectors, regulated utilities are more likely to be impacted by government actions. Credit impacts can occur directly through rate regulation, and indirectly through energy, environmental and tax policies. Government actions affect fuel prices, the mix of generating plants, the certainty and timing of revenues and costs, and the likelihood that regulated utilities will experience financial stress. While our evolving view of the impact of such policies and the general economic and financial climate is reflected in ratings for each utility, some considerations do not lend themselves to incorporation in a simple ratings grid.[15]

### Diversified Operations at the Utility

A small number of regulated utilities have diversified operations that are segments within the utility company, as opposed to the more common practice of housing such operations in one or more separate affiliates. In general, we will seek to evaluate the other businesses that are material in accordance with the appropriate methodology and the rating will reflect considerations from such methodologies. There may be analytical limitations in evaluating the utility and non-utility businesses when segment financial results are not fully broken out and these may be addressed through estimation based on available information. Since regulated utilities are a relatively low risk business compared to other corporate sectors, in most cases diversified non-utility operations increase the business risk profile of a utility. Reflecting this tendency, we note that assigned ratings are typically lower than grid- indicated ratings for such companies.

### Event Risk

We also recognize the possibility that an unexpected event could cause a sudden and sharp decline in an issuer's fundamental creditworthiness. Typical special events include mergers and acquisitions, asset sales, spin-offs, capital restructuring programs, litigation and shareholder distributions.

### Corporate Governance

Among the areas of focus in corporate governance are audit committee financial expertise, the incentives created by executive compensation packages, related party transactions, interactions with outside auditors, and ownership structure.

### Investment and Acquisition Strategy

In our credit assessment we take into consideration management's investment strategy. Investment strategy is benchmarked with that of the other companies in the rated universe to further verify its consistency. Acquisitions can strengthen a company's business. Our assessment of a company's tolerance for acquisitions at a given rating level takes into consideration (1) management's risk appetite, including the likelihood of further acquisitions over the medium term; (2) share buy-back activity; (3) the company's commitment to specific leverage targets; and (4) the volatility of the underlying businesses, as well as that of the business acquired. Ratings can often hold after acquisitions even if leverage temporarily climbs above normally acceptable ranges. However, this depends on (1) the strategic fit; (2) pro-forma

[15] See also the cross-sector methodology "How Sovereign Credit Quality May Affect Other Ratings." A link to this and other sector and cross-sector credit rating methodologies can be found in the Related Research section of this report.

capitalization/leverage following an acquisition; and (3) our confidence that credit metrics will be restored in a relatively short timeframe.

## Financial Controls

We rely on the accuracy of audited financial statements to assign and monitor ratings in this sector. Such accuracy is only possible when companies have sufficient internal controls, including centralized operations, the proper tone at the top and consistency in accounting policies and procedures.

Weaknesses in the overall financial reporting processes, financial statement restatements or delays in regulatory filings can be indications of a potential breakdown in internal controls.

## Appendix A: Regulated Electric and Gas Utilities Methodology Factor Grid

### Factor 1a: Legislative and Judicial Underpinnings of the Regulatory Framework (12.5%)

| Aaa | Aa | A | Baa |
|---|---|---|---|
| Utility regulation occurs under a fully developed framework that is national in scope based onlegislation that provides the utility a nearly absolute monopoly (see note 1) within its service territory, an unquestioned assurance that rates will be set in a manner that will permit the utility to make and recover all necessary investments, an extremely high degree of clarity as to the manner in which utilities will be regulated and prescriptive methods and procedures for setting rates. Existing utility law is comprehensive and supportive such that changes in legislation are not expected to be necessary; or any changes that have occurred have been strongly supportive of utilities credit quality in general and sufficiently forward- looking so as to address problems before they occurred. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility should they occur, including access to national courts, very strong judicial precedent in the interpretation of utility laws, and a strong rule of law. We expect these conditions to continue. | Utility regulation occurs under a fully developed national, state or provincial framework based on legislation that provides the utility an extremely strong monopoly (see note 1) within its service territory, a strong assurance, subject to limited review, that rates will be set in a manner that will permit the utility to make and recover all necessary investments, a very high degree of clarity as to the manner in which utilities will be regulated and reasonably prescriptive methods and procedures for setting rates. If there have been changes in utility legislation, they have been timely and clearly credit supportive of the issuer in a manner that shows the utility has had a strong voice in the process. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility, should they occur including access to national courts, strong judicial precedent in the interpretation of utility laws, and a strong rule of law. We expect these conditions to continue. | Utility regulation occurs under a well developed national, state or provincial framework based on legislation that provides the utility a very strong monopoly (see note 1) within its service territory, an assurance, subject to reasonable prudency requirements, that rates will be set in a manner that will permit the utility to make and recover all necessary investments, a high degree of clarity as to the manner in which utilities will be regulated, and overall guidance for methods and procedures for setting rates. If there have been changes in utility legislation, they have been mostly timely and on the whole credit supportive for the issuer, and the utility has had a clear voice in the legislative process. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility, should they occur, including access to national courts, clear judicial precedent in the interpretation of utility law, and a strong rule of law. We expect these conditions to continue. | Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation that provides the utility a strong monopoly within its service territory that may have some exceptions such as greater self-generation (see note 1), a general assurance that, subject to prudency requirements that are mostly reasonable, rates will be set will be set in a manner that will permit the utility to make and recover all necessary investments, reasonable clarity as to the manner in which utilities will be regulated and overall guidance for methods and procedures for setting rates; or (ii) under a new framework where independent and transparent regulation exists in other sectors. If there have been changes in utility legislation, they have been credit supportive or at least balanced for the issuer but potentially less timely, and the utility had a voice in the legislative process. There is either (i) an independent judiciary that can arbitrate disagreements between the regulator and the utility, including access to courts at least at the state or provincial level, reasonably clear judicial precedent in the interpretation of utility laws, and a generally strong rule of law; or<br>(ii) regulation has been applied (under a well developed framework) in a manner such that redress to an independent arbiter has not been required. We expect these conditions to continue. |

| Ba | B | Caa |
|---|---|---|
| Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility a monopoly within its service territory that is generally strong but may have a greater level of exceptions (see note 1), and that, subject to prudency requirements which may be stringent, provides a general assurance (with somewhat less certainty) that rates will be set will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where the jurisdiction has a history of less independent and transparent regulation in other sectors. Either: (i) the judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or may not be fully independent of the regulator or other political pressure, but there is a reasonably strong rule of law; or (ii) where there is no independent arbiter, the regulation has mostly been applied in a manner such redress has not been required. We expect these conditions to continue. | Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility monopoly within its service territory that is reasonably strong but may have important exceptions, and that, subject to prudency requirements which may be stringent or at times arbitrary, provides more limited or less certain assurance that rates will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where we would expect less independent and transparent regulation, based either on the regulator's history in other sectors or other factors. The judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or may not be fully independent of the regulator or other political pressure, but there is a reasonably strong rule of law. Alternately, where there is no independent arbiter, the regulation has been applied in a manner that often requires some redress adding more uncertainty to the regulatory framework.<br>There may be a periodic risk of creditor-unfriendly government intervention in utility markets or rate-setting. | Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility a monopoly within its service territory, but with little assurance that rates will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where we would expect unpredictable or adverse regulation, based either on the jurisdiction's history of in other sectors or other factors. The judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or is viewed as not being fully independent of the regulator or other political pressure. Alternately, there may be no redress to an effective independent arbiter. The ability of the utility to enforce its monopoly or prevent uncompensated usage of its system may be limited. There may be a risk of creditor- unfriendly nationalization or other significant intervention in utility markets or rate-setting. |

Note 1: The strength of the monopoly refers to the legal, regulatory and practical obstacles for customers in the utility's territory to obtain service from another provider. Examples of a weakening of the monopoly would include the ability of a city or large user to leave the utility system to set up their own system, the extent to which self-generation is permitted (e.g. cogeneration) and/or encouraged (e.g., net metering, DSM generation). At the lower end of the ratings spectrum, the utility's monopoly may be challenged by pervasive theft and unauthorized use. Since utilities are generally presumed to be monopolies, a strong monopoly position in itself is not sufficient for a strong score in this sub-factor, but a weakening of the monopoly can lower the score.

* 10% weight for issuers that lack generation **0% weight for issuers that lack generation

**Factor 1b: Consistency and Predictability of Regulation (12.5%)**

| Aaa | Aa | A | Baa |
|---|---|---|---|
| The issuer's interaction with the regulator has led to a strong, lengthy track record of predictable, consistent and favorable decisions. The regulator is highly credit supportive of the issuer and utilities in general. We expect these conditions to continue. | The issuer's interaction with the regulator has a led to a considerable track record of predominantly predictable and consistent decisions. The regulator is mostly credit supportive of utilities in general and in almost all instances has been highly credit supportive of the issuer. We expect these conditions to continue. | The issuer's interaction with the regulator has led to a track record of largely predictable and consistent decisions. The regulator may be somewhat less credit supportive of utilities in general, but has been quite credit supportive of the issuer in most circumstances. We expect these conditions to continue. | The issuer's interaction with the regulator has led to an adequate track record. The regulator is generally consistent and predictable, but there may some evidence of inconsistency or unpredictability from time to time, or decisions may at times be politically charged. However, instances of less credit supportive decisions are based on reasonable application of existing rules and statutes and are not overly punitive. We expect these conditions to continue. |

| Ba | B | Caa |
|---|---|---|
| We expect that regulatory decisions will demonstrate considerable inconsistency or unpredictability or that decisions will be politically charged, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. The regulator may have a history of less credit supportive regulatory decisions with respect to the issuer, but we expect that the issuer will be able to obtain support when it encounters financial stress, with some potentially material delays. The regulator's authority may be eroded at times by legislative or political action. The regulator may not follow the framework for some material decisions. | We expect that regulatory decisions will be largely unpredictable or even somewhat arbitrary, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. However, we expect that the issuer will ultimately be able to obtain support when it encounters financial stress, albeit with material or more extended delays.<br>Alternately, the regulator is untested, lacks a consistent track record, or is undergoing substantial change. The regulator's authority may be eroded on frequent occasions by legislative or political action. The regulator may more frequently ignore the framework in a manner detrimental to the issuer. | We expect that regulatory decisions will be highly unpredictable and frequently adverse, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction.<br>Alternately, decisions may have credit supportive aspects, but may often be unenforceable. The regulator's authority may have been seriously eroded by legislative or political action. The regulator may consistently ignore the framework to the detriment of the issuer. |

**Factor 2a: Timeliness of Recovery of Operating and Capital Costs (12.5%)**

| Aaa | Aa | A | Baa |
|---|---|---|---|
| Tariff formulas and automatic cost recovery mechanisms provide full and highly timely recovery of all operating costs and essentially contemporaneous return on all incremental capital investments, with statutory provisions in place to preclude the possibility of challenges to rate increases or cost recovery mechanisms. By statute and by practice, general rate cases are efficient, focused on an impartial review, quick, and permit inclusion of fully forward -looking costs. | Tariff formulas and automatic cost recovery mechanisms provide full and highly timely recovery of all operating costs and essentially contemporaneous or near-contemporaneous return on most incremental capital investments, with minimal challenges by regulators to companies' cost assumptions. By statute and by practice, general rate cases are efficient, focused on an impartial review, of a very reasonable duration before non-appealable interim rates can be collected, and primarily permit inclusion of forward- looking costs. | Automatic cost recovery mechanisms provide full and reasonably timely recovery of fuel, purchased power and all other highly variable operating expenses. Material capital investments may be made under tariff formulas or other rate-making permitting reasonably contemporaneous returns, or may be submitted under other types of filings that provide recovery of cost of capital with minimal delays. Instances of regulatory challenges that delay rate increases or cost recovery are generally related to large, unexpected increases in sizeable construction projects. By statute or by practice, general rate cases are reasonably efficient, primarily focused on an impartial review, of a reasonable duration before rates (either permanent or non- refundable interim rates) can be collected, and permit inclusion of important forward -looking costs. | Fuel, purchased power and all other highly variable expenses are generally recovered through mechanisms incorporating delays of less than one year, although some rapid increases in costs may be delayed longer where such deferrals do not place financial stress on the utility. Incremental capital investments may be recovered primarily through general rate cases with moderate lag, with some through tariff formulas. Alternately, there may be formula rates that are untested or unclear.<br>Potentially greater tendency for delays due to regulatory intervention, although this will generally be limited to rates related to large capital projects or rapid increases in operating costs. |

| Ba | B | Caa |
|---|---|---|
| There is an expectation that fuel, purchased power or other highly variable expenses will eventually be recovered with delays that will not place material financial stress on the utility, but there may be some evidence of an unwillingness by regulators to make timely rate changes to address volatility in fuel, or purchased power, or other market-sensitive expenses. Recovery of costs related to capital investments may be subject to delays that are somewhat lengthy, but not so pervasive as to be expected to discourage important investments. | The expectation that fuel, purchased power or other highly variable expenses will be recovered may be subject to material delays due to second-guessing of spending decisions by regulators or due to political intervention. Recovery of costs related to capital investments may be subject to delays that are material to the issuer, or may be likely to discourage some important investment. | The expectation that fuel, purchased power or other highly variable expenses will be recovered may be subject to extensive delays due to second-guessing of spending decisions by regulators or due to political intervention. Recovery of costs related to capital investments may be uncertain, subject to delays that are extensive, or that may be likely to discourage even necessary investment. |

Note: Tariff formulas include formula rate plans as well as trackers and riders related to capital investment.

**Factor 2b: Sufficiency of Rates and Returns (12.5%)**

| Aaa | Aa | A | Baa |
|---|---|---|---|
| Sufficiency of rates to cover costs and attract capital is (and will continue to be) unquestioned. | Rates are (and we expect will continue to be) set at a level that permits full cost recovery and a fair return on all investments, with minimal challenges by regulators to companies' cost assumptions. This will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are strong relative to global peers. | Rates are (and we expect will continue to be) set at a level that generally provides full cost recovery and a fair return on investments, with limited instances of regulatory challenges and disallowances. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are generally above average relative to global peers, but may at times be average. | Rates are (and we expect will continue to be) set at a level that generally provides full operating cost recovery and a mostly fair return on investments, but there may be somewhat more instances of regulatory challenges and disallowances, although ultimate rate outcomes are sufficient to attract capital without difficulty. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are average relative to global peers, but may at times be somewhat below average. |

| Ba | B | Caa |
|---|---|---|
| Rates are (and we expect will continue to be) set at a level that generally provides recovery of most operating costs but return on investments may be less predictable, and there may be decidedly more instances of regulatory challenges and disallowances, but ultimate rate outcomes are generally sufficient to attract capital. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are generally below average relative to global peers, or where allowed returns are average but difficult to earn. Alternately, the tariff formula may not take into account all cost components and/or remuneration of investments may be unclear or at times unfavorable. | We expect rates will be set at a level that at times fails to provide recovery of costs other than cash costs, and regulators may engage in somewhat arbitrary second-guessing of spending decisions or deny rate increases related to funding ongoing operations based much more on politics than on prudency reviews. Return on investments may be set at levels that discourage investment. We expect that rate outcomes may be difficult or uncertain, negatively affecting continued access to capital. Alternately, the tariff formula may fail to take into account significant cost components other than cash costs, and/or remuneration of investments may be generally unfavorable. | We expect rates will be set at a level that often fails to provide recovery of material costs, and recovery of cash costs may also be at risk. Regulators may engage in more arbitrary second-guessing of spending decisions or deny rate increases related to funding ongoing operations based primarily on politics. Return on investments may be set at levels that discourage necessary maintenance investment. We expect that rate outcomes may often be punitive or highly uncertain, with a markedly negative impact on access to capital. Alternately, the tariff formula may fail to take into account significant cash cost components, and/or remuneration of investments may be primarily unfavorable. |

## Factor 3: Diversification (10%)

| Weighting 10% | Sub-Factor Weighting | Aaa | Aa | A | Baa |
|---|---|---|---|---|---|
| Market Position | 5% * | A very high degree of multinational and regional diversity in terms of regulatory regimes and/or service territory economies. | Material operations in three or more nations or substantial geographic regions providing very good diversity of regulatory regimes and/or service territory economies. | Material operations in two to three nations, states, provinces or regions that provide good diversity of regulatory regimes and service territory economies. Alternately, operates within a single regulatory regime with low volatility, and the service territory economy is robust, has a very high degree of diversity and has demonstrated resilience in economic cycles. | May operate under a single regulatory regime viewed as having low volatility, or where multiple regulatory regimes are not viewed as providing much diversity. The service territory economy may have some concentration and cyclicality, but is sufficiently resilient that it can absorb reasonably foreseeable increases in utility rates. |
| Generation and Fuel Diversity | 5% ** | A high degree of diversity in terms of generation and/or fuel sources such that the utility and rate-payers are well insulated from commodity price changes, no generation concentration, and very low exposures to Challenged or Threatened Sources (see definitions below). | Very good diversification in terms of generation and/or fuel sources such that the utility and rate-payers are affected only minimally by commodity price changes, little generation concentration, and low exposures to Challenged or Threatened Sources. | Good diversification in terms of generation and/or fuel sources such that the utility and rate-payers have only modest exposure to commodity price changes; however, may have some concentration in a source that is neither Challenged nor Threatened.<br>Exposure to Threatened Sources is low. While there may be some exposure to Challenged Sources, it is not a cause for concern. | Adequate diversification in terms of generation and/or fuel sources such that the utility and rate-payers have moderate exposure to commodity price changes; however, may have some concentration in a source that is Challenged. Exposure to Threatened Sources is moderate, while exposure to Challenged Sources is manageable. |

| | Sub-Factor Weighting | Ba | B | Caa | Definitions |
|---|---|---|---|---|---|
| Market Position | 5% * | Operates in a market area with somewhat greater concentration and cyclicality in the service territory economy and/or exposure to storms and other natural disasters, and thus less resilience to absorbing reasonably foreseeable increases in utility rates. May show somewhat greater volatility in the regulatory regime(s). | Operates in a limited market area with material concentration and more severe cyclicality in service territory economy such that cycles are of materially longer duration or reasonably foreseeable increases in utility rates could present a material challenge to the economy.<br>Service territory may have geographic concentration that limits its resilience to storms and other natural disasters, or may be an emerging market. May show decided volatility in the regulatory regime(s). | Operates in a concentrated economic service territory with pronounced concentration, macroeconomic risk factors, and/or exposure to natural disasters. | Challenged Sources are generation plants that face higher but not insurmountable economic hurdles resulting from penalties or taxes on their operation, or from environmental upgrades that are required or likely to be required. Some examples are carbon-emitting plants that incur carbon taxes, plants that must buy emissions credits to operate, and plants that must install environmental equipment to continue to operate, in each where the taxes/credits/upgrades are sufficient to have a material impact on those plants' competitiveness relative to other generation types or on the utility's rates, but where the impact is not so severe as to be likely require plant closure. |
| Generation and Fuel Diversity | 5% ** | Modest diversification in generation and/or fuel sources such that the utility or rate- payers have greater exposure to commodity price changes. Exposure to Challenged and Threatened Sources may be more pronounced, but the utility will be able to access alternative sources without undue financial stress. | Operates with little diversification in generation and/or fuel sources such that the utility or rate-payers have high exposure to commodity price changes. Exposure to Challenged and Threatened Sources may be high, and accessing alternate sources may be challenging and cause more financial stress, but ultimately feasible. | Operates with high concentration in generation and/or fuel sources such that the utility or rate-payers have exposure to commodity price shocks. Exposure to Challenged and Threatened Sources may be very high, and accessing alternate sources may be highly uncertain. | Threatened Sources are generation plants that are not currently able to operate due to major unplanned outages or issues with licensing or other regulatory compliance, and plants that are highly likely to be required to de- activate, whether due to the effectiveness of currently existing or expected rules and regulations or due to economic challenges. Some recent examples would include coal fired plants in the US that are not economic to retro-fit to meet mercury and air toxics standards, plants that cannot meet the effective date of those standards, nuclear plants in Japan that have not been licensed to re-start after the Fukushima Dai-ichi accident, and nuclear plants that are required to be phased out within 10 years (as is the case in some European countries). |

* 10% weight for issuers that lack generation **0% weight for issuers that lack generation

**Factor 4: Financial Strength**

| Weighting 40% | Sub-Factor Weighting | | Aaa | Aa | A | Baa | Ba | B | Caa |
|---|---|---|---|---|---|---|---|---|---|
| CFO pre-WC + Interest / Interest | 7.5% | | ≥ 8x | 6x - 8x | 4.5x - 6x | 3x - 4.5x | 2x - 3x | 1x - 2x | < 1x |
| CFO pre-WC / Debt | 15% | Standard Grid | ≥ 40% | 30% - 40% | 22% - 30% | 13% - 22% | 5% - 13% | 1% - 5% | < 1% |
| | | Low Business Risk Grid | ≥ 38% | 27% - 38% | 19% - 27% | 11% - 19% | 5% - 11% | 1% - 5% | < 1% |
| CFO pre-WC - Dividends / Debt | 10% | Standard Grid | ≥ 35% | 25% - 35% | 17% - 25% | 9% - 17% | 0% - 9% | (5%) - 0% | < (5%) |
| | | Low Business Risk Grid | ≥ 34% | 23% - 34% | 15% - 23% | 7% - 15% | 0% - 7% | (5%) - 0% | < (5%) |
| Debt / Capitalization | 7.5% | Standard Grid | < 25% | 25% - 35% | 35% - 45% | 45% - 55% | 55% - 65% | 65% - 75% | ≥ 75% |
| | | Low Business Risk Grid | < 29% | 29% - 40% | 40% - 50% | 50% - 59% | 59% - 67% | 67% - 75% | ≥ 75% |

## Appendix B: Approach to Ratings within a Utility Family

*Typical Composition of a Utility Family*

A typical utility company structure consists of a holding company ("HoldCo") that owns one or more operating subsidiaries (each an "OpCo"). OpCos may be regulated utilities or non-utility companies. Financing of these entities varies by region, in part due to the regulatory framework. A HoldCo typically has no operations – its assets are mostly limited to its equity interests in subsidiaries, and potentially other investments in subsidiaries or minority interests in other companies. However, in certain cases there may be material operations at the HoldCo level. Financing can occur primarily at the OpCo level, primarily at the HoldCo level, or at both HoldCo and OpCos in varying proportions. When a HoldCo has multiple utility OpCos, they will often be located in different regulatory jurisdictions. A HoldCo may have both levered and unlevered OpCos.

*General Approach to a Utility Family*

In our analysis, we generally consider the stand-alone credit profile of an OpCo and the credit profile of its ultimate parent HoldCo (and any intermediate HoldCos), as well as the profile of the family as a whole, while acknowledging that these elements can have cross-family credit implications in varying degrees, principally based on the regulatory framework of the OpCos and the financing model (which has often developed in response to the regulatory framework).

In addition to considering individual OpCos under this (or another applicable) methodology, we typically[16] approach a HoldCo rating by assessing the qualitative and quantitative factors in this methodology for the consolidated entity and each of its utility subsidiaries. Ratings of individual entities in the issuer family may be pulled up or down based on the interrelationships among the companies in the family and their relative credit strength.

In considering how closely aligned or how differentiated ratings should be among members of a utility family, we assess a variety of factors, including:

- Regulatory or other barriers to cash movement among OpCos and from OpCos to HoldCo
- Differentiation of the regulatory frameworks of the various OpCos
- Specific ring-fencing provisions at particular OpCos
- Financing arrangements – for instance, each OpCo may have its own financing arrangements, or the sole liquidity facility may be at the parent; there may be a liquidity pool among certain but not all members of the family; certain members of the family may better be able to withstand a temporary hiatus of external liquidity or access to capital markets
- Financial covenants and the extent to which an Event of Default by one OpCo limits availability of liquidity to another member of the family
- The extent to which higher leverage at one entity increases default risk for other members of the family
- An entity's exposure to or insulation from an affiliate with high business risk
- Structural features or other limitations in financing agreements that restrict movements of funds, investments, provision of guarantees or collateral, etc.
- The relative size and financial significance of any particular OpCo to the HoldCo and the family

[16] See paragraph at the end of this section for approaches to Hybrid HoldCos.

See also those factors noted in Notching for Structural Subordination of Holding Companies.

Our approach to a Hybrid HoldCo (see definition in Appendix C) depends in part on the importance of its non-utility operations and the availability of information on individual businesses. If the businesses are material and their individual results are fully broken out in financial disclosures, we may be able to assess each material business individually by reference to the relevant Moody's methodologies to arrive at a composite assessment for the combined businesses. If non-utility operations are material but are not broken out in financial disclosures, we may look at the consolidated entity under more than one methodology. When non-utility operations are less material but could still impact the overall credit profile, the difference in business risks and our estimation of their impact on financial performance will be qualitatively incorporated in the rating.

*Higher Barriers to Cash Movement with Financing Predominantly at the OpCos*

Where higher barriers to cash movement exist on an OpCo or OpCos due the regulatory framework or debt structural features, ratings among family members are likely to be more differentiated. For instance, for utility families with OpCos in the US, where regulatory barriers to free cash movement are relatively high, greater importance is generally placed on the stand-alone credit profile of the OpCo.

Our observation of major defaults and bankruptcies in the US sector generally corroborates a view that regulation creates a degree of separateness of default probability. For instance, Portland General Electric (Baa1 RUR-up) did not default on its securities, even though its then-parent Enron Corp. entered bankruptcy proceedings. When Entergy New Orleans (Ba2 stable) entered into bankruptcy, the ratings of its affiliates and parent Entergy Corporation (Baa3 stable) were unaffected. PG&E Corporation (Baa1 stable) did not enter bankruptcy proceedings despite bankruptcies of two major subsidiaries - Pacific Gas & Electric Company (A3 stable) in 2001 and National Energy Group in 2003.

The degree of separateness may be greater or smaller and is assessed on a case by case basis, because situational considerations are important. One area we consider is financing arrangements. For instance, there will tend to be greater differentiation if each member of a family has its own bank credit facilities and difficulties experienced by one entity would not trigger events of default for other entities. While the existence of a money pool might appear to reduce separateness between the participants, there may be regulatory barriers within money pools that preserve separateness. For instance, non-utility entities may have access to the pool only as a borrower, only as a lender, and even the utility entities may have regulatory limits on their borrowings from the pool or their credit exposures to other pool members. If the only source of external liquidity for a money pool is borrowings by the HoldCo under its bank credit facilities, there would be less separateness, especially if the utilities were expected to depend on that liquidity source. However, the ability of an OpCo to finance itself by accessing capital markets must also be considered. Inter-company tax agreements can also have an impact on our view of how separate the risks of default are.

For a HoldCo, the greater the regulatory, economic, and geographic diversity of its OpCos, the greater its potential separation from the default probability of any individual subsidiary. Conversely, if a HoldCo's actions have made it clear that the HoldCo will provide support for an OpCo encountering some financial stress (for instance, due to delays and/or cost over-runs on a major construction project), we would be likely to perceive less separateness.

Even where high barriers to cash movement exist, onerous leverage at a parent company may not only give rise to greater notching for structural subordination at the parent, it may also pressure an OpCo's rating, especially when there is a clear dependence on an OpCo's cash flow to service parent debt.

While most of the regulatory barriers to cash movement are very real, they are not absolute. Furthermore, while it is not usually in the interest of an insolvent parent or its creditors to bring an operating utility into a bankruptcy proceeding, such an occurrence is not impossible.

The greatest separateness occurs where strong regulatory insulation is supplemented by effective ring-fencing provisions that fully separate the management and operations of the OpCo from the rest of the family and limit the parent's ability to cause the OpCo to commence bankruptcy proceedings as well as limiting dividends and cash transfers. Typically, most entities in US utility families (including HoldCos and OpCos) are rated within 3 notches of each other. However, it is possible for the HoldCo and OpCos in a family to have much wider notching due to the combination of regulatory imperatives and strong ring-fencing that includes a significant minority shareholder who must agree to important corporate decisions, including a voluntary bankruptcy filing.

*Lower Barriers to Cash Movement with Financing Predominantly at the OpCos*

Our approach to rating issuers within a family where there are lower regulatory barriers to movement of cash from OpCos to HoldCos (e.g., many parts of Asia and Europe) places greater emphasis on the credit profile of the consolidated group. Individual OpCos are considered based on their individual characteristics and their importance to the family, and their assigned ratings are typically banded closely around the consolidated credit profile of the group due to the expectation that cash will transit relatively freely among family entities.

Some utilities may have OpCos in jurisdictions where cash movement among certain family members is more restricted by the regulatory framework, while cash movement from and/or among OpCos in other jurisdictions is less restricted. In these situations, OpCos with more restrictions may vary more widely from the consolidated credit profile while those with fewer restrictions may be more tightly banded around the other entities in the corporate family group.

## Appendix C: Brief Descriptions of the Types of Companies Rated Under This Methodology

**The following describes the principal categories of companies rated under this methodology:**

**Vertically Integrated Utility:** Vertically integrated utilities are regulated electric or combination utilities (see below) that own generation, distribution and (in most cases) electric transmission assets. Vertically integrated utilities are generally engaged in all aspects of the electricity business. They build power plants, procure fuel, generate power, build and maintain the electric grid that delivers power from a group of power plants to end-users (including high and low voltage lines, transformers and substations), and generally meet all of the electric needs of the customers in a specific geographic area (also called a service territory). The rates or tariffs for all of these monopolistic activities are set by the relevant regulatory authority.

**Transmission & Distribution Utility**: Transmission & Distribution utilities (T&Ds) typically operate in deregulated markets where generation is provided under a competitive framework. T&Ds own and operate the electric grid that transmits and/or distributes electricity within a specific state or region.

T&Ds provide electrical transportation and distribution services to carry electricity from power plants and transmission lines to retail, commercial, and industrial customers. T&Ds are typically responsible for billing customers for electric delivery and/or supply, and most have an obligation to provide a standard supply or provider-of-last-resort (POLR) service to customers that have not switched to a competitive supplier. These factors distinguish T&Ds from Networks, whose customers are retail electric suppliers and/or other electricity companies. In a smaller number of cases, T&Ds rated under this methodology may not have an obligation to provide POLR services, but are regulated in sub- sovereign jurisdictions. The rates or tariffs for these monopolistic T&D activities are set by the relevant regulatory authority.

**Local Gas Distribution Company:** Distribution is the final step in delivering natural gas to customers. While some large industrial, commercial, and electric generation customers receive natural gas directly from high capacity pipelines that carry gas from gas producing basins to areas where gas is consumed, most other users receive natural gas from their local gas utility, also called a local distribution company (LDC). LDCs are regulated utilities involved in the delivery of natural gas to consumers within a specific geographic area. Specifically, LDCs typically transport natural gas from delivery points located on large-diameter pipelines (that usually operate at fairly high pressure) to households and businesses through thousands of miles of small-diameter distribution pipe (that usually operate at fairly low pressure). LDCs are typically responsible for billing customers for gas delivery and/or supply, and most also have the responsibility to procure gas for at least some of their customers, although in some markets gas supply to all customers is on a competitive basis. These factors distinguish LDCs from gas networks, whose customers are retail gas suppliers and/or other natural gas companies. The rates or tariffs for these monopolistic activities are set by the relevant regulatory authority.

**Integrated Gas Utility:** Integrated gas regulated utilities are regulated utilities that deliver gas to all end users in a particular service territory by sourcing the commodity; operating transport infrastructure that often combines high pressure pipelines with low pressure distribution systems and, in some cases, gas storage, re-gasification or other related facilities; and performing other supply-related activities, such as customer billing and metering. The rates or tariffs for the totality of these activities are set by the relevant regulatory authority. Many integrated gas utilities are national in scope.

**Combination Utility:** Combination utilities are those that combine an LDC or Integrated Gas Utility with either a vertically integrated utility or a T&D utility. The rates or tariffs for these monopolistic activities are set by the relevant regulatory authority.

**Regulated Generation Utility:** Regulated generation utilities (Regulated Gencos) are utilities that almost exclusively have generation assets, but their activities are generally regulated like those of vertically integrated utilities. In the US, this means that the purchasers of their output (typically other investor-owned, municipal or cooperative utilities) pay a regulated rate based on the total allowed costs of the Regulated Genco, including a return on equity based on a capital structure designated by the regulator (primarily FERC). Companies that have been included in this group include certain generation companies (including in Korea and China) that are not rate regulated in the usual sense of recovering costs plus a regulated rate of return on either equity or asset value. Instead, we have looked at a combination of governmental action with respect to setting feed-in tariffs and directives on how much generation will be built (or not built) in combination with a generally high degree of government ownership, and we have concluded that these companies are currently best rated under this methodology. Future evolution in our view of the operating and/or regulatory environment of these companies could lead us to conclude that they may be more appropriately rated under a related methodology (for example, Unregulated Utilities and Power Companies).

**Independent System Operator:** An Independent System Operator (ISO) is an organization formed in certain regional electricity markets to act as the sole chief coordinator of an electric grid. In the areas where an ISO is established, it coordinates, controls and monitors the operation of the electrical power system to assure that electric supply and demand are balanced at all times, and, to the extent possible, that electric demand is met with the lowest-cost sources. ISOs seek to assure adequate transmission and generation resources, usually by identifying new transmission needs and planning for a generation reserve margin above expected peak demand. In regions where generation is competitive, they also seek to establish rules that foster a fair and open marketplace, and they may conduct price-setting auctions for energy and/or capacity. The generation resources that an ISO coordinates may belong to vertically integrated utilities or to independent power producers. ISOs may not be rate-regulated in the traditional sense, but fall under governmental oversight. All participants in the regional grid are required to pay a fee or tariff (often volumetric) to the ISO that is designed to recover its costs, including costs of investment in systems and equipment needed to fulfill their function. ISOs may be for profit or not-for-profit entities.

In the US, most ISOs were formed at the direction or recommendation of the Federal Energy Regulatory Commission (FERC), but the ISO that operates solely in Texas falls under state jurisdiction. Some US ISOs also perform certain additional functions such that they are designated as Regional Transmission Organizations (or RTOs).

**Transmission-Only Utility:** Transmission-only utilities are solely focused on owning and operating transmission assets. The transmission lines these utilities own are typically high-voltage and allow energy producers to transport electric power over long distances from where it is generated (or received) to the transmission or distribution system of a T&D or vertically integrated utility. Unlike most of the other utilities rated under this methodology, transmission-only utilities primarily provide services to other utilities and ISOs. Transmission-only utilities in most parts of the world other than the US have been rated under the Regulated Networks methodology.

**Utility Holding Company (Utility HoldCo):** As detailed in Appendix B, regulated electric and gas utilities are often part of corporate families under a parent holding company. The operating subsidiaries of Utility HoldCos are overwhelmingly regulated electric and gas utilities.

**Hybrid Holding Company (Hybrid HoldCo):** Some utility families contain a mix of regulated electric and gas utilities and other types of companies, but the regulated electric and gas utilities represent the majority of the consolidated cash flows, assets and debt. The parent company is thus a Hybrid HoldCo.

## Appendix D: Key Industry Issues Over the Intermediate Term

### Political and Regulatory Issues

As highly regulated monopolistic entities, regulated utilities continually face political and regulatory risk, and managing these risks through effective outreach to key customers as well as key political and regulatory decision-makers is, or at least should be, a core competency of companies in this sector. However, larger waves of change in the political, regulatory or economic environment have the potential to cause substantial changes in the level of risk experienced by utilities and their investors in somewhat unpredictable ways.

One of the more universal risks faced by utilities currently is the compression of allowed returns. A long period of globally low interest rates, held down by monetary stimulus policies, has generally benefitted utilities, since reductions in allowed returns have been slower than reductions in incurred capital costs. Essentially all regulated utilities face a ratcheting down of allowed and/or earned returns. More difficult to predict is how regulators will respond when monetary stimulus reverses, and how well utilities will fare when fixed income investors require higher interest rates and equity investors require higher total returns and growth prospects.

The following global snapshot highlights that regulatory frameworks evolve over time. On an overall basis in the US over the past several years, we have noted some incremental positive regulatory trends, including greater use of formula rates, trackers and riders, and (primarily for natural gas utilities) de-coupling of returns from volumetric sales. In Canada, the framework has historically been viewed as predictable and stable, which has helped offset somewhat lower levels of equity in the capital structure, but the compression of returns has been relatively steep in recent years. In Japan, the regulatory authorities are working through the challenges presented by the decision to shut down virtually all of the country's nuclear generation capacity, leading to uncertainty regarding the extent to which increased costs will be reflected in rate increases sufficient to permit returns on capital to return to prior levels. China's regulatory framework has continued to evolve, with fairly low transparency and some time-to-time shifts in favored versus less-favored generation sources balanced by an overall state policy of assuring sustainability of the sector, adequate supply of electricity and affordability to the general public. Singapore and Hong Kong have fairly well developed and supportive regulatory frameworks despite a trend towards lower returns, whereas Malaysia, Korea and Thailand have been moving towards a more transparent regulatory framework. The Philippines is in the process of deregulating its power market, while Indian power utilities continue to grapple with structural challenges. In Latin America, there is a wide dispersion among frameworks, ranging from the more stable, long established and predictable framework in Chile to the decidedly unpredictable framework in Argentina. Generally, as Latin American economies have evolved to more stable economic policies, regulatory frameworks for utilities have also shown greater stability and predictability.

All of the other issues discussed in this section have a regulatory/political component, either as the driver of change or in reaction to changes in economic environments and market factors.

### Economic and Financial Market Conditions

As regulated monopolies, electric and gas utilities have generally been quite resistant to unsettled economic and financial market conditions for several reasons. Unlike many companies that face direct market-based competition, their rates do not decrease when demand decreases. The elasticity of demand for electricity and gas is much lower than for most products in the consumer economy.

When financial markets are volatile, utilities often have greater capital market access than industrial companies in competitive sectors, as was the case in the 2007-2009 recession. However, regulated electric and gas utilities are by no means immune to a protracted or severe recession.

Severe economic malaise can negatively affect utility credit profiles in several ways. Falling demand for electricity or natural gas may negatively impact margins and debt service protection measures, especially when rates are designed such that a substantial portion of fixed costs is in theory recovered through volumetric charges. The decrease in demand in the 2007-2009 recession was notable in comparison to prior recessions, especially in the residential sector. Poor economic conditions can make it more difficult for regulators to approve needed rate increases or provide timely cost recovery for utilities, resulting in higher cost deferrals and longer regulatory lag. Finally, recessions can coincide with a lack of confidence in the utility sector that impacts access to capital markets for a period of time. For instance, in the Great Depression and (to a lesser extent) in the 2001 recession, access for some issuers was curtailed due to the sector's generally higher leverage than other corporate sectors, combined with a concerns over a lack of transparency in financial reporting.

### Fuel Price Volatility and the Global Impact of Shale Gas

The ability of most utilities to pass through their fuel costs to end users may insulate a utility from exposure to price volatility of these fuels, but it does not insulate consumers. Consumers and regulators complained vociferously about utility rates during the run-up in hydro-carbon prices in 2005-2008 (oil, natural gas and, to a lesser extent, coal). The steep decline in US natural gas prices since 2009, caused in large part by the development of shale gas and shale oil resources, has been a material benefit to US utilities, because many have been able to pass through substantial base rate increases during a period when all-in rates were declining. Shale hydro-carbons have also had a positive impact, albeit one that is less immediate and direct, on non-US utilities. In much of the eastern hemisphere, natural gas prices under long-term contracts have generally been tied to oil prices, but utilities and other industrial users have started to have some success in negotiating to de-link natural gas from oil. In addition, increasing US production of oil has had a noticeable impact on world oil prices, generally benefitting oil and gas users.

Not all utilities will benefit equally. Utilities that have locked in natural gas under high-priced long- term contracts that they cannot re-negotiate are negatively impacted if they cannot pass through their full contracted cost of gas, or if the high costs cause customer dissatisfaction and regulatory backlash. Utilities with large coal fleets or utilities constructing nuclear power plants may also face negative impacts on their regulatory environment, since their customers will benefit less from lower natural gas prices.

### Distributed Generation Versus the Central Station Paradigm

The regulation and the financing of electric utilities are based on the premise that the current model under which electricity is generated and distributed to customers will continue essentially unchanged for many decades to come. This model, called the central station paradigm (because electricity is generated in large, centrally located plants and distributed to a large number of customers, who may in fact be hundreds of miles away), has been in place since the early part of the 20th century. The model has worked because the economies of scale inherent to very large power plants has more than offset the cost and inefficiency (through power losses) inherent to maintaining a grid for transmitting and distributing electricity to end users.

Despite rate structures that only allow recovery of invested capital over many decades (up to 60 years), utilities can attract capital because investors assume that rates will continue to be collected for at least that long a period. Regulators and politicians assume that taxes and regulatory charges levied on electricity usage will be paid by a broad swath of residences and businesses and will not materially discourage usage of

electricity in a way that would decrease the amount of taxes collected. A corollary assumption is that the number of customers taking electricity from the system during that period will continue to be high enough such that rates will be reasonable and generally more attractive than other alternatives. In the event that consumers were to switch en masse to alternate sources of generating or receiving power (for instance distributed generation), rates for remaining customers would either not cover the utility's costs, or rates would need to be increased so much that more customers may be incentivized to leave the system. This scenario has been experienced in the regulated US copper wire telephone business, where rates have increased quite dramatically for users who have not switched to digital or wireless telephone service. While this scenario continues to be unlikely for the electricity sector, distributed generation, especially from solar panels, has made inroads in certain regions.

Distributed generation is any retail-scale generation, differentiated from self-generation, which generally describes a large industrial plant that builds its own reasonably large conventional power plant to meet its own needs. While some residential property owners that install distributed generation may choose to sever their connection to the local utility, most choose to remain connected, generating power into the grid when it is both feasible and economic to do so, and taking power from the grid at other times. Distributed generation is currently concentrated in roof-top photovoltaic solar panels, which have benefitted from varying levels of tax incentives in different jurisdictions.

Regulatory treatment has also varied, but some rate structures that seek to incentivize distributed renewable energy are decidedly credit negative for utilities, in particular net metering.

Under net metering, a customer receives a credit from the utility for all of its generation at the full (or nearly full) retail rate and pays only for power taken, also at the retail rate, resulting in a materially reduced monthly bill relative to a customer with no distributed generation. The distributed generation customer has no obligation to generate any particular amount of power, so the utility must stand ready to generate and deliver that customer's full power needs at all times. Since most utility costs, including the fixed costs of financing and maintaining generation and delivery systems, are currently collected through volumetric rates, a customer owning distributed generation effectively transfers a portion of the utility's costs of serving that customer to other customers with higher net usage, notably to customers that do not own distributed generation. The higher costs may incentivize more customers to install solar panels, thereby shifting the utility's fixed costs to an even smaller group of rate-payers. California is an example of a state employing net solar metering in its rate structure, whereas in New Jersey, which has the second largest residential solar program in the US, utilities buy power at a price closer to their blended cost of generation, which is much lower than the retail rate.

To date, solar generation and net metering have not had a material credit impact on any utilities, but ratings could be negatively impacted if the programs were to grow and if rate structures were not amended so that each customer's monthly bill more closely approximated the cost of serving that customer.

In our current view, the possibility that there will be a widespread movement of electric utility customers to sever themselves from the grid is remote. However, we acknowledge that new technologies, such as the development of commercially viable fuel cells and/or distributed electric storage, could disrupt materially the central station paradigm and the credit quality of the utility sector.

## Nuclear Issues

Utilities with nuclear generation face unique safety, regulatory, and operational issues. The nuclear disaster at Fukushima Daiichi had a severely negative credit impact on its owner, Tokyo Electric Power Company, Incorporated, as well as all the nuclear utilities in the country. Japan previously generated about 30% of its

power from 50 reactors, but all are currently either idled or shut down, and utilities in the country face materially higher costs of replacement power, a credit negative.

Fukushima Daiichi also had global consequences. Germany's response was to require that all nuclear power plants in the country be shut by 2022. Switzerland opted for a phase-out by 2031. (Most European nuclear plants are owned by companies rated under other the Unregulated Utilities and Power Companies methodology.) Even in countries where the regulatory response was more moderate, increased regulatory scrutiny has raised operating costs, a credit negative, especially in the US, where low natural gas prices have rendered certain primarily smaller nuclear plants uneconomic. Nonetheless, we view robust and independent nuclear safety regulation as a credit-positive for the industry.

Other general issues for nuclear operators include higher costs and lower reliability related to the increasing age of the fleet. In 2013, Duke Energy Florida, Inc. decided to shut permanently Crystal River Unit 3 after it determined that a de-lamination (or separation) in the concrete of the outer wall of the containment building was uneconomic to repair. San Onofre Nuclear Generating Station was closed permanently in 2013 after its owners, including Southern California Edison Company (A3, RUR-up) and San Diego Gas & Electric Company (A2, RUR-up), decided not to pursue a re-start in light of operating defects in two steam generators that had been replaced in 2010 and 2011.

Korea Hydro and Nuclear Power Company Limited and its parent, Korea Electric Power Corporation, faced a scandal related to alleged corruption and acceptance of falsified safety documents provided by its parts suppliers for nuclear plants. Korean prosecutors' widening probe into KHNP's use of substandard parts at many of its 23 nuclear power plants caused three plants to be shut down temporarily.

## Appendix E: Regional and Other Considerations

### Notching Considerations for US First Mortgage Bonds

In most regions, our approach to notching between different debt classes of the same regulated utility issuer follows the guidance in the publication "Updated Summary Guidance for Notching Bonds, Preferred Stocks and Hybrid Securities of Corporate Issuers," including a one notch differential between senior secured and senior unsecured debt.[17] However, in most cases we have two notches between the first mortgage bonds and senior unsecured debt of regulated electric and gas utilities in the US.

Wider notching differentials between debt classes may also be appropriate in speculative grade. Additional insights for speculative grade issuers are provided in the publication "Loss Given Default for Speculative-Grade Companies."[18]

First mortgage bond holders in the US generally benefit from a first lien on most of the fixed assets used to provide utility service, including such assets as generating stations, transmission lines, distribution lines, switching stations and substations, and gas distribution facilities, as well as a lien on franchise agreements. In our view, the critical nature of these assets to the issuers and to the communities they serve has been a major factor that has led to very high recovery rates for this class of debt in situations of default, thereby justifying a two notch uplift. The combination of the breadth of assets pledged and the bankruptcy-tested recovery experience has been unique to the US.

In some cases, there is only a one notch differential between US first mortgage bonds and the senior unsecured rating. For instance, this is likely when the pledged property is not considered critical infrastructure for the region, or if the mortgage is materially weakened by carve-outs, lien releases or similar creditor-unfriendly terms.

### Securitization

The use of securitization, a financing technique utilizing a discrete revenue stream (typically related to recovery of specifically defined expenses) that is dedicated to servicing specific securitization debt, has primarily been used in the US, where it has been quite pervasive in the past two decades. The first generation of securitization bonds were primarily related to recovery of the negative difference between the market value of utilities' generation assets and their book value when certain states switched to competitive electric supply markets and utilities sold their generation (so-called stranded costs). This technique was then used for significant storm costs (especially hurricanes) and was eventually broadened to include environmental related expenditures, deferred fuel costs, or even deferred miscellaneous expenses. States that have implemented securitization frameworks include Arkansas, California, Connecticut, Illinois, Louisiana, Maryland, Massachusetts, Mississippi, New Hampshire, New Jersey, Ohio, Pennsylvania, Texas and West Virginia. In its simplest form, a securitization isolates and dedicates a stream of cash flow into a separate special purpose entity (SPE). The SPE uses that stream of revenue and cash flow to provide annual debt service for the securitized debt instrument. Securitization is typically underpinned by specific legislation to segregate the securitization revenues from the utility's revenues to assure their continued collection, and the details of the enabling legislation may vary from state to state. The utility benefits from the securitization because it receives an immediate source of cash (although it gives up the opportunity to earn a return on the corresponding asset), and ratepayers benefit because the cost of the securitized debt is

[17] A link to this and other sector and cross-sector credit rating methodologies can be found in the Related Research section of this report.
[18] A link to this and other sector and cross-sector credit rating methodologies can be found in the Related Research section of this report,

lower than the utility's cost of debt and much lower than its all-in cost of capital, which reduces the revenue requirement associated with the cost recovery.

In the presentation of US securitization debt in published financial ratios, we make our own assessment of the appropriate credit representation but in most cases follows the accounting in audited statements under US Generally Accepted Accounting Principles (GAAP), which in turn considers the terms of enabling legislation. As a result, accounting treatment may vary. In most states utilities have been required to consolidate securitization debt under GAAP, even though it is technically non- recourse.

In general, we view securitization debt of utilities as being on-credit debt, in part because the rates associated with it reduce the utility's headroom to increase rates for other purposes while keeping all-in rates affordable to customers. Thus, where accounting treatment is off balance sheet, we seek to adjust the company's ratios by including the securitization debt and related revenues for our analysis. Where the securitized debt is on balance sheet, our credit analysis also considers the significance of ratios that exclude securitization debt and related revenues. Since securitization debt amortizes mortgage-style, including it makes ratios look worse in early years (when most of the revenue collected goes to pay interest) and better in later years (when most of the revenue collected goes to pay principal).

### Strong levels of government ownership in Asia Pacific (ex-Japan) provide rating uplift

Strong levels of government ownership have dominated the credit profiles of utilities in Asia Pacific (excluding Japan), generally leading to ratings that are a number of notches above the Baseline Credit Assessment. Regulated electric and gas utilities with significant government ownership are rated using this methodology in conjunction with the Joint Default Analysis approach in our methodology for Government-Related Issuers.[19]

### Support system for large corporate entities in Japan can provide ratings uplift, with limits

Our ratings for large corporate entities in Japan reflect the unique nature of the country's support system, and they are higher than they would otherwise be if such support were disregarded. This is reflected in the tendency for ratings of Japanese utilities to be higher than their grid implied ratings. However, even for large prominent companies, our ratings consider that support will not be endless and is less likely to be provided when a company has questionable viability rather than being in need of temporary liquidity assistance.

[19] A link to this and other sector and cross-sector credit rating methodologies can be found in the Related Research section of this report.

## Appendix F: Treatment of Power Purchase Agreements ("PPAs")

Although many utilities own and operate power stations, some have entered into PPAs to source electricity from third parties to satisfy retail demand. The motivation for these PPAs may be one or more of the following: to outsource operating risks to parties more skilled in power station operation, to provide certainty of supply, to reduce balance sheet debt, to fix the cost of power, or to comply with regulatory mandates regarding power sourcing, including renewable portfolio standards. While we regard PPAs that reduce operating or financial risk as a credit positive, some aspects of PPAs may negatively affect the credit of utilities. The most conservative treatment would be to treat a PPA as a debt obligation of the utility as, by paying the capacity charge, the utility is effectively providing the funds to service the debt associated with the power station. At the other end of the continuum, the financial obligations of the utility could also be regarded as an ongoing operating cost, with no long-term capital component recognized.

Under most PPAs, a utility is obliged to pay a capacity charge to the power station owner (which may be another utility or an Independent Power Producer – IPP); this charge typically covers a portion of the IPP's fixed costs in relation to the power available to the utility. These fixed payments usually help to cover the IPP's debt service and are made irrespective of whether the utility calls on the IPP to generate and deliver power. When the utility requires generation, a further energy charge, to cover the variable costs of the IPP, will also typically be paid by the utility. Some other similar arrangements are characterized as tolling agreements, or long-term supply contracts, but most have similar features to PPAs and are thus we analyze them as PPAs.

### PPAs are recognized qualitatively to be a future use of cash whether or not they are treated as debt-like obligations in financial ratios

The starting point of our analysis is the issuer's audited financial statements – we consider whether the utility's accountants determine that the PPA should be treated as a debt equivalent, a capitalized lease, an operating lease, or in some other manner. PPAs have a wide variety of operational and financial terms, and it is our understanding that accountants are required to have a very granular view into the particular contractual arrangements in order to account for these PPAs in compliance with applicable accounting rules and standards. However, accounting treatment for PPAs may not be entirely consistent across US GAAP, IFRS or other accounting frameworks. In addition, we may consider that factors not incorporated into the accounting treatment may be relevant (which may include the scale of PPA payments, their regulatory treatment including cost recovery mechanisms, or other factors that create financial or operational risk for the utility that is greater, in our estimation, than the benefits received). When the accounting treatment of a PPA is a debt or lease equivalent (such that it is reported on the balance sheet, or disclosed as an operating lease and thus included in our adjusted debt calculation), we generally do not make adjustments to remove the PPA from the balance sheet.

However, in relevant circumstances we consider making adjustments that impute a debt equivalent to PPAs that are off-balance sheet for accounting purposes.

Regardless of whether we consider that a PPA warrants or does not warrant treatment as a debt obligation, we assess the totality of the impact of the PPA on the issuer's probability of default. Costs of a PPA that cannot be recovered in retail rates creates material risk, especially if they also cannot be recovered through market sales of power.

## Additional considerations for PPAs

PPAs have a wide variety of financial and regulatory characteristics, and each particular circumstance may be treated differently by Moody's. Factors which determine where on the continuum we treat a particular PPA include the following:

- Risk management: An overarching principle is that PPAs have normally been used by utilities as a risk management tool and we recognize that this is the fundamental reason for their existence. Thus, we will not automatically penalize utilities for entering into contracts for the purpose of reducing risk associated with power price and availability. Rather, we will look at the aggregate commercial position, evaluating the risk to a utility's purchase and supply obligations. In addition, PPAs are similar to other long-term supply contracts used by other industries and their treatment should not therefore be fundamentally different from that of other contracts of a similar nature.
- Pass-through capability: Some utilities have the ability to pass through the cost of purchasing power under PPAs to their customers. As a result, the utility takes no risk that the cost of power is greater than the retail price it will receive. Accordingly we regard these PPA obligations as operating costs with no long-term debt-like attributes. PPAs with no pass-through ability have a greater risk profile for utilities. In some markets, the ability to pass through costs of a PPA is enshrined in the regulatory framework, and in others can be dictated by market dynamics. As a market becomes more competitive or if regulatory support for cost recovery deteriorates, the ability to pass through costs may decrease and, as circumstances change, our treatment of PPA obligations will alter accordingly.
- Price considerations: The price of power paid by a utility under a PPA can be substantially above or below the market price of electricity. A below-market price will motivate the utility to purchase power from the IPP in excess of its retail requirements, and to sell excess electricity in the spot market. This can be a significant source of cash flow for some utilities. On the other hand, utilities that are compelled to pay capacity payments to IPPs when they have no demand for the power or at an above-market price may suffer a financial burden if they do not get full recovery in retail rates. We will focus particularly on PPAs that have mark-to-market losses, which typically indicates that they have a material impact on the utility's cash flow.
- Excess Reserve Capacity: In some jurisdictions there is substantial reserve capacity and thus a significant probability that the electricity available to a utility under PPAs will not be required by the market. This increases the risk to the utility that capacity payments will need to be made when there is no demand for the power. We may determine that all of a utility's PPAs represent excess capacity, or that a portion of PPAs are needed for the utility's supply obligations plus a normal reserve margin, while the remaining portion represents excess capacity. In the latter case, we may impute debt to specific PPAs that are excess or take a proportional approach to all of the utility's PPAs.
- Risk-sharing: Utilities that own power plants bear the associated operational, fuel procurement and other risks. These must be balanced against the financial and liquidity risk of contracting for the purchase of power under a PPA. We will examine on a case-by case basis the relative credit risk associated with PPAs in comparison to plant ownership.
- Purchase requirements: Some PPAs are structured with either options or requirements to purchase the asset at the end of the PPA term. If the utility has an economically meaningful requirement to purchase, we would most likely consider it to be a debt obligation. In most such cases, the obligation would already receive on-balance sheet treatment under relevant accounting standards.
- Default provisions: In most cases, the remedies for default under a PPA do not include acceleration of amounts due, and in many cases PPAs would not be considered as debt in a bankruptcy scenario and could potentially be cancelled. Thus, PPAs may not materially increase Loss Given Default for the

utility. In addition, PPAs are not typically considered debt for cross- default provisions under a utility's debt and liquidity arrangements. However, the existence of non-standard default provisions that are debt-like would have a large impact on our treatment of a PPA. In addition, payments due under PPAs are senior unsecured obligations, and any inability of the utility to make them materially increases default risk.

Each of these factors will be considered by our analysts and a decision will be made as to the importance of the PPA to the risk analysis of the utility.

## Methods for estimating a liability amount for PPAs

According to the weighting and importance of the PPA to each utility and the level of disclosure, we may approximate a debt obligation equivalent for PPAs using one or more of the methods discussed below. In each case we look holistically at the PPA's credit impact on the utility, including the ability to pass through costs and curtail payments, the materiality of the PPA obligation to the overall business risk and cash flows of the utility, operational constraints that the PPA imposes, the maturity of the PPA obligation, the impact of purchased power on market-based power sales (if any) that the utility will engage in, and our view of future market conditions and volatility.

» Operating Cost: If a utility enters into a PPA for the purpose of providing an assured supply and there is reasonable assurance that regulators will allow the costs to be recovered in regulated rates, we may view the PPA as being most akin to an operating cost. Provided that the accounting treatment for the PPA is, in this circumstance, off-balance sheet, we will most likely make no adjustment to bring the obligation onto the utility's balance sheet.

» Annual Obligation x 6: In some situations, the PPA obligation may be estimated by multiplying the annual payments by a factor of six (in most cases). This method is sometimes used in the capitalization of operating leases. This method may be used as an approximation where the analyst determines that the obligation is significant but cannot otherwise be quantified otherwise due to limited information.

» Net Present Value: Where the analyst has sufficient information, we may add the NPV of the stream of PPA payments to the debt obligations of the utility. The discount rate used will be our estimate of the cost of capital of the utility.

» Debt Look-Through: In some circumstances, where the debt incurred by the IPP is directly related to the off-taking utility, there may be reason to allocate the entire debt (or a proportional part related to share of power dedicated to the utility) of the IPP to that of the utility.

» Mark-to-Market: In situations in which we believe that the PPA prices exceed the market price and thus will create an ongoing liability for the utility, we may use a net mark-to-market method, in which the NPV of the utility's future out-of-the-money net payments will be added to its total debt obligations.

» Consolidation: In some instances where the IPP is wholly dedicated to the utility, it may be appropriate to consolidate the debt and cash flows of the IPP with that of the utility. If the utility purchases only a portion of the power from the IPP, then that proportion of debt might be consolidated with the utility.

If we have determined to impute debt to a PPA for which the accounting treatment is not on-balance sheet, we will in some circumstances use more than one method to estimate the debt equivalent obligations imposed by the PPA, and compare results. If circumstances (including regulatory treatment or market conditions) change over time, the approach that is used may also vary.

## Moody's Related Research

The credit ratings assigned in this sector are primarily determined by this credit rating methodology. Certain broad methodological considerations (described in one or more credit rating methodologies) may also be relevant to the determination of credit ratings of issuers and instruments in this sector. Potentially related sector and cross-sector credit rating methodologies can be found here.

For data summarizing the historical robustness and predictive power of credit ratings assigned using this credit rating methodology, see link.

Please refer to Moody's Rating Symbols & Definitions, which is available here, for further information. Definitions of Moody's most common ratio terms can be found in "Moody's Basic Definitions for Credit Statistics, User's Guide", accessible via this link.

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# Key Credit Factors For The Regulated Utilities Industry

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# Key Credit Factors For The Regulated Utilities Industry

*(**Editor's Note:** This criteria article supersedes "Key Credit Factors: Business And Financial Risks In The Investor-Owned Utilities Industry," published Nov. 26, 2008, "Assessing U.S. Utility Regulatory Environments," Nov. 7, 2007, and "Revised Methodology For Adjusting Amounts Reported By U.K. GAAP Water Companies For Infrastructure Renewals Accounting," Jan. 27, 2010.)*

1. Standard & Poor's Ratings Services is refining and adapting its methodology and assumptions for its Key Credit Factors: Criteria For Regulated Utilities. We are publishing these criteria in conjunction with our corporate criteria (see "Corporate Methodology, published Nov. 19, 2013). This article relates to our criteria article, "Principles Of Credit Ratings," Feb. 16, 2011.

2. This criteria article supersedes "Key Credit Factors: Business And Financial Risks In The Investor-Owned Utilities Industry," Nov. 26, 2008, "Criteria: Assessing U.S. Utility Regulatory Environments," Nov. 7, 2007, and "Revised Methodology For Adjusting Amounts Reported By U.K. GAAP Water Companies For Infrastructure Renewals Accounting," Jan. 27, 2010.

## SCOPE OF THE CRITERIA

3. These criteria apply to entities where regulated utilities represent a material part of their business, other than U.S. public power, water, sewer, gas, and electric cooperative utilities that are owned by federal, state, or local governmental bodies or by ratepayers. A regulated utility is defined as a corporation that offers an essential or near-essential infrastructure product, commodity, or service with little or no practical substitute (mainly electricity, water, and gas), a business model that is shielded from competition (naturally, by law, shadow regulation, or by government policies and oversight), and is subject to comprehensive regulation by a regulatory body or implicit oversight of its rates (sometimes referred to as tariffs), service quality, and terms of service. The regulators base the rates that they set on some form of cost recovery, including an economic return on assets, rather than relying on a market price. The regulated operations can range from individual parts of the utility value chain (water, gas, and electricity networks or "grids," electricity generation, retail operations, etc.) to the entire integrated chain, from procurement to sales to the end customer. In some jurisdictions, our view of government support can also affect the final rating outcome, as per our government-related entity criteria (see "General Criteria: Rating Government-Related Entities: Methodology and Assumptions," Dec. 9, 2010).

## SUMMARY OF THE CRITERIA

4. Standard & Poor's is updating its criteria for analyzing regulated utilities, applying its corporate criteria. The criteria for evaluating the competitive position of regulated utilities amend and partially supersede the "Competitive Position" section of the corporate criteria when evaluating these entities. The criteria for determining the cash flow leverage

assessment partially supersede the "Cash Flow/Leverage" section of the corporate criteria for the purpose of evaluating regulated utilities. The section on liquidity for regulated utilities partially amends existing criteria. All other sections of the corporate criteria apply to the analysis of regulated utilities.

## IMPACT ON OUTSTANDING RATINGS

5. These criteria could affect the issuer credit ratings of about 5% of regulated utilities globally due primarily to the introduction of new financial benchmarks in the corporate criteria. Almost all ratings changes are expected to be no more than one notch, and most are expected to be in an upward direction.

## EFFECTIVE DATE AND TRANSITION

6. These criteria are effective immediately on the date of publication.

## METHODOLOGY

### Part I--Business Risk Analysis

#### Industry risk

7. Within the framework of Standard & Poor's general criteria for assessing industry risk, we view regulated utilities as a "very low risk" industry (category '1'). We derive this assessment from our view of the segment's low risk ('2') cyclicality and very low risk ('1') competitive risk and growth assessment.

8. In our view, demand for regulated utility services typically exhibits low cyclicality, being a function of such key drivers as employment growth, household formation, and general economic trends. Pricing is non-cyclical, since it is usually based in some form on the cost of providing service.

#### Cyclicality

9. We assess cyclicality for regulated utilities as low risk ('2'). Utilities typically offer products and services that are essential and not easily replaceable. Based on our analysis of global Compustat data, utilities had an average peak-to-trough (PTT) decline in revenues of about 6% during recessionary periods since 1952. Over the same period, utilities had an average PTT decline in EBITDA margin of about 5% during recessionary periods, with PTT EBITDA margin declines less severe in more recent periods. The PTT drop in profitability that occurred in the most recent recession (2007-2009) was less than the long-term average.

10. With an average drop in revenues of 6% and an average profitability decline of 5%, utilities' cyclicality assessment calibrates to low risk ('2'). We generally consider that the higher the level of profitability cyclicality in an industry, the higher the credit risk of entities operating in that industry. However, the overall effect of cyclicality on an industry's risk profile may be mitigated or exacerbated by an industry's competitive and growth environment.

### Competitive risk and growth

11. We view regulated utilities as warranting a very low risk ('1') competitive risk and growth assessment. For competitive risk and growth, we assess four sub-factors as low, medium, or high risk. These sub-factors are:

- Effectiveness of industry barriers to entry;
- Level and trend of industry profit margins;
- Risk of secular change and substitution by products, services, and technologies; and
- Risk in growth trends.

### Effectiveness of barriers to entry--low risk

12. Barriers to entry are high. Utilities are normally shielded from direct competition. Utility services are commonly naturally monopolistic (they are not efficiently delivered through competitive channels and often require access to public thoroughfares for distribution), and so regulated utilities are granted an exclusive franchise, license, or concession to serve a specified territory in exchange for accepting an obligation to serve all customers in that area and the regulation of its rates and operations.

### Level and trend of industry profit margins--low risk

13. Demand is sometimes and in some places subject to a moderate degree of seasonality, and weather conditions can significantly affect sales levels at times over the short term. However, those factors even out over time, and there is little pressure on margins if a utility can pass higher costs along to customers via higher rates.

### Risk of secular change and substitution of products, services, and technologies--low risk

14. Utility products and services are not overly subject to substitution. Where substitution is possible, as in the case of natural gas, consumer behavior is usually stable and there is not a lot of switching to other fuels. Where switching does occur, cost allocation and rate design practices in the regulatory process can often mitigate this risk so that utility profitability is relatively indifferent to the substitutions.

### Risk in industry growth trends--low risk

15. As noted above, regulated utilities are not highly cyclical. However, the industry is often well established and, in our view, long-range demographic trends support steady demand for essential utility services over the long term. As a result, we would expect revenue growth to generally match GDP when economic growth is positive.

## B. Country risk

16. In assessing "country risk" for a regulated utility, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

## C. Competitive position

17. In the corporate criteria, competitive position is assessed as ('1') excellent, ('2') strong, ('3') satisfactory, ('4') fair, ('5') weak, or ('6') vulnerable.

18. The analysis of competitive position includes a review of:

- Competitive advantage,
- Scale, scope, and diversity,
- Operating efficiency, and
- Profitability.

19. In the corporate criteria we assess the strength of each of the first three components. Each component is assessed as either: (1) strong, (2) strong/adequate, (3) adequate, (4) adequate/weak, or (5) weak. After assessing these components, we determine the preliminary competitive position assessment by ascribing a specific weight to each component. The applicable weightings will depend on the company's Competitive Position Group Profile. The group profile for regulated utilities is "National Industries & Utilities," with a weighting of the three components as follows: competitive advantage (60%), scale, scope, and diversity (20%), and operating efficiency (20%). Profitability is assessed by combining two sub-components: level of profitability and the volatility of profitability.

20. "Competitive advantage" cannot be measured with the same sub-factors as competitive firms because utilities are not primarily subject to influence of market forces. Therefore, these criteria supersede the "competitive advantage" section of the corporate criteria. We analyze instead a utility's "regulatory advantage" (section 1 below).

### Assessing regulatory advantage

21. The regulatory framework/regime's influence is of critical importance when assessing regulated utilities' credit risk because it defines the environment in which a utility operates and has a significant bearing on a utility's financial performance.

22. We base our assessment of the regulatory framework's relative credit supportiveness on our view of how regulatory stability, efficiency of tariff setting procedures, financial stability, and regulatory independence protect a utility's credit quality and its ability to recover its costs and earn a timely return. Our view of these four pillars is the foundation of a utility's regulatory support. We then assess the utility's business strategy, in particular its regulatory strategy and its ability to manage the tariff-setting process, to arrive at a final regulatory advantage assessment.

23. When assessing regulatory advantage, we first consider four pillars and sub-factors that we believe are key for a utility to recover all its costs, on time and in full, and earn a return on its capital employed:

24. Regulatory stability:

- Transparency of the key components of the rate setting and how these are assessed
- Predictability that lowers uncertainty for the utility and its stakeholders
- Consistency in the regulatory framework over time

25. Tariff-setting procedures and design:

- Recoverability of all operating and capital costs in full
- Balance of the interests and concerns of all stakeholders affected
- Incentives that are achievable and contained

26. Financial stability:

- Timeliness of cost recovery to avoid cash flow volatility
- Flexibility to allow for recovery of unexpected costs if they arise
- Attractiveness of the framework to attract long-term capital
- Capital support during construction to alleviate funding and cash flow pressure during periods of heavy investments

27. Regulatory independence and insulation:

- Market framework and energy policies that support long-term financeability of the utilities and that is clearly enshrined in law and separates the regulator's powers
- Risks of political intervention is absent so that the regulator can efficiently protect the utility's credit profile even during a stressful event

28. We have summarized the key characteristics of the assessments for regulatory advantage in table 1.

**Table 1**

**Preliminary Regulatory Advantage Assessment**

| Qualifier | What it means | Guidance |
|---|---|---|
| Strong | The utility has a major regulatory advantage due to one or a combination of factors that support cost recovery and a return on capital combined with lower than average volatility of earnings and cash flows. | The utility operates in a regulatory climate that is transparent, predictable, and consistent from a credit perspective. |
| | There are strong prospects that the utility can sustain this advantage over the long term. | The utility can fully and timely recover all its fixed and variable operating costs, investments and capital costs (depreciation and a reasonable return on the asset base). |
| | This should enable the utility to withstand economic downturns and political risks better than other utilities. | The tariff set may include a pass-through mechanism for major expenses such as commodity costs, or a higher return on new assets, effectively shielding the utility from volume and input cost risks. |
| | | Any incentives in the regulatory scheme are contained and symmetrical. |
| | | The tariff set includes mechanisms allowing for a tariff adjustment for the timely recovery of volatile or unexpected operating and capital costs. |
| | | There is a track record of earning a stable, compensatory rate of return in cash through various economic and political cycles and a projected ability to maintain that record. |
| | | There is support of cash flows during construction of large projects, and pre-approval of capital investment programs and large projects lowers the risk of subsequent disallowances of capital costs. |
| | | The utility operates under a regulatory system that is sufficiently insulated from political intervention to efficiently protect the utility's credit risk profile even during stressful events. |
| Adequate | The utility has some regulatory advantages and protection, but not to the extent that it leads to a superior business model or durable benefit. | It operates in a regulatory environment that is less transparent, less predictable, and less consistent from a credit perspective. |
| | The utility has some but not all drivers of well-managed regulatory risk. Certain regulatory factors support the business's long-term stability and viability but could result in periods of below-average levels of profitability and greater profit volatility. However, overall these regulatory drivers are partially offset by the utility's disadvantages or lack of sustainability of other factors. | The utility is exposed to delays or is not, with sufficient certainty, able to recover all of its fixed and variable operating costs, investments. and capital costs (depreciation and a reasonable return on the asset base) within a reasonable time. |
| | | Incentive ratemaking practices are asymmetrical and material, and could detract from credit quality. |
| | | The utility is exposed to the risk that it doesn't recover unexpected or volatile costs in a full or less than timely manner due to lack of flexible reopeners or annual revenue adjustments. |
| | | There is an uneven track record of earning a compensatory rate of return in cash through various economic and political cycles and a projected ability to maintain that record. |

**Table 1**

**Preliminary Regulatory Advantage Assessment (cont.)**

| | | |
|---|---|---|
| | | There is little or no support of cash flows during construction, and investment decisions on large projects (and therefore the risk of subsequent disallowances of capital costs) rest mostly with the utility. |
| | | The utility operates under a regulatory system that is not sufficiently insulated from political intervention and is sometimes subject to overt political influence. |
| Weak | The utility suffers from a complete breakdown of regulatory protection that places the utility at a significant disadvantage. | The utility operates in an opaque regulatory climate that lacks transparency, predictability, and consistency. |
| | The utility's regulatory risk is such that the long-term cost recovery and investment return is highly uncertain and materially delayed, leading to volatile or weak cash flows. There is the potential for material stranded assets with no prospect of recovery. | The utility cannot fully and/or timely recover its fixed and variable operating costs, investments, and capital costs (depreciation and a reasonable return on the asset base). |
| | | There is a track record of earning minimal or negative rates of return in cash through various economic and political cycles and a projected inability to improve that record sustainably. |
| | | The utility must make significant capital commitments with no solid legal basis for the full recovery of capital costs. |
| | | Ratemaking practices actively harm credit quality. |
| | | The utility is regularly subject to overt political influence. |

29. After determining the preliminary regulatory advantage assessment, we then assess the utility's business strategy. Most importantly, this factor addresses the effectiveness of a utility's management of the regulatory risk in the jurisdiction(s) where it operates. In certain jurisdictions, a utility's regulatory strategy and its ability to manage the tariff-setting process effectively so that revenues change with costs can be a compelling regulatory risk factor. A utility's approach and strategies surrounding regulatory matters can create a durable "competitive advantage" that differentiates it from peers, especially if the risk of political intervention is high. The assessment of a utility's business strategy is informed by historical performance and its forward-looking business objectives. We evaluate these objectives in the context of industry dynamics and the regulatory climate in which the utility operates, as evaluated through the factors cited in paragraphs 24-27.

30. We modify the preliminary regulatory advantage assessment to reflect this influence positively or negatively. Where business strategy has limited effect relative to peers, we view the implications as neutral and make no adjustment. A positive assessment improves the preliminary regulatory advantage assessment by one category and indicates that management's business strategy is expected to bolster its regulatory advantage through favorable commission rulings beyond what is typical for a utility in that jurisdiction. Conversely, where management's strategy or businesses decisions result in adverse regulatory outcomes relative to peers, such as failure to achieve typical cost recovery or allowed returns, we adjust the preliminary regulatory advantage assessment one category worse. In extreme cases of poor strategic execution, the preliminary regulatory advantage assessment is adjusted by two categories worse (when possible; see table 2) to reflect management decisions that are likely to result in a significantly adverse regulatory outcome relative to peers.

**Table 2**

**Determining The Final Regulatory Advantage Assessment**

| | --Strategy modifier-- | | | |
|---|---|---|---|---|
| **Preliminary regulatory advantage score** | **Positive** | **Neutral** | **Negative** | **Very negative** |
| Strong | Strong | Strong | Strong/Adequate | Adequate |
| Strong/Adequate | Strong | Strong/Adequate | Adequate | Adequate/Weak |
| Adequate | Strong/Adequate | Adequate | Adequate/Weak | Weak |
| Adequate/Weak | Adequate | Adequate/Weak | Weak | Weak |
| Weak | Adequate/Weak | Weak | Weak | Weak |

### Scale, scope, and diversity

31 We consider the key factors for this component of competitive position to be primarily operational scale and diversity of the geographic, economic, and regulatory foot prints. We focus on a utility's markets, service territories, and diversity and the extent that these attributes can contribute to cash flow stability while dampening the effect of economic and market threats.

32. A utility that warrants a Strong or Strong/Adequate assessment has scale, scope, and diversity that support the stability of its revenues and profits by limiting its vulnerability to most combinations of adverse factors, events, or trends. The utility's significant advantages enable it to withstand economic, regional, competitive, and technological threats better than its peers. It typically is characterized by a combination of the following factors:

- A large and diverse customer base with no meaningful customer concentration risk, where residential and small to medium commercial customers typically provide most operating income.
- The utility's range of service territories and regulatory jurisdictions is better than others in the sector.
- Exposure to multiple regulatory authorities where we assess preliminary regulatory advantage to be at least Adequate. In the case of exposure to a single regulatory regime, the regulatory advantage assessment is either Strong or Strong/Adequate.
- No meaningful exposure to a single or few assets or suppliers that could hurt operations or could not easily be replaced.

33. A utility that warrants a Weak or Weak/Adequate assessment lacks scale, scope, and diversity such that it compromises the stability and sustainability of its revenues and profits. The utility's vulnerability to, or reliance on, various elements of this sub-factor is such that it is less likely than its peers to withstand economic, competitive, or technological threats. It typically is characterized by a combination of the following factors:

- A small customer base, especially if burdened by customer and/or industry concentration combined with little economic diversity and average to below-average economic prospects;
- Exposure to a single service territory and a regulatory authority with a preliminary regulatory advantage assessment of Adequate or Adequate/Weak; or
- Dependence on a single supplier or asset that cannot easily be replaced and which hurts the utility's operations.

34. We generally believe a larger service territory with a diverse customer base and average to above-average economic growth prospects provides a utility with cushion and flexibility in the recovery of operating costs and ongoing investment (including replacement and growth capital spending), as well as lessening the effect of external shocks (i.e.,

extreme local weather) since the incremental effect on each customer declines as the scale increases.

35. We consider residential and small commercial customers as having more stable usage patterns and being less exposed to periodic economic weakness, even after accounting for some weather-driven usage variability. Significant industrial exposure along with a local economy that largely depends on one or few cyclical industries potentially contributes to the cyclicality of a utility's load and financial performance, magnifying the effect of an economic downturn.

36. A utility's cash flow generation and stability can benefit from operating in multiple geographic regions that exhibit average to better than average levels of wealth, employment, and growth that underpin the local economy and support long-term growth. Where operations are in a single geographic region, the risk can be ameliorated if the region is sufficiently large, demonstrates economic diversity, and has at least average demographic characteristics.

37. The detriment of operating in a single large geographic area is subject to the strength of regulatory assessment. Where a utility operates in a single large geographic area and has a strong regulatory assessment, the benefit of diversity can be incremental.

### Operating efficiency

38. We consider the key factors for this component of competitive position to be:

- Compliance with the terms of its operating license, including safety, reliability, and environmental standards;
- Cost management; and
- Capital spending: scale, scope, and management.

39. Relative to peers, we analyze how successful a utility management achieves the above factors within the levels allowed by the regulator in a manner that promotes cash flow stability. We consider how management of these factors reduces the prospect of penalties for noncompliance, operating costs being greater than allowed, and capital projects running over budget and time, which could hurt full cost recovery.

40. The relative importance of the above three factors, particularly cost and capital spending management, is determined by the type of regulation under which the utility operates. Utilities operating under robust "cost plus" regimes tend to be more insulated given the high degree of confidence costs will invariably be passed through to customers. Utilities operating under incentive-based regimes are likely to be more sensitive to achieving regulatory standards. This is particularly so in the regulatory regimes that involve active consultation between regulator and utility and market testing as opposed to just handing down an outcome on a more arbitrary basis.

41. In some jurisdictions, the absolute performance standards are less relevant than how the utility performs against the regulator's performance benchmarks. It is this performance that will drive any penalties or incentive payments and can be a determinant of the utilities' credibility on operating and asset-management plans with its regulator.

42. Therefore, we consider that utilities that perform these functions well are more likely to consistently achieve determinations that maximize the likelihood of cost recovery and full inclusion of capital spending in their asset bases. Where regulatory resets are more at the discretion of the utility, effective cost management, including of labor, may allow for more control over the timing and magnitude of rate filings to maximize the chances of a constructive outcome such as full operational and capital cost recovery while protecting against reputational risks.

43. A regulated utility that warrants a Strong or Strong/Adequate assessment for operating efficiency relative to peers generates revenues and profits through minimizing costs, increasing efficiencies, and asset utilization. It typically is characterized by a combination of the following:

- High safety record;
- Service reliability is strong, with a track record of meeting operating performance requirements of stakeholders, including those of regulators. Moreover, the utility's asset profile (including age and technology) is such that we have confidence that it could sustain favorable performance against targets;
- Where applicable, the utility is well-placed to meet current and potential future environmental standards;
- Management maintains very good cost control. Utilities with the highest assessment for operating efficiency have shown an ability to manage both their fixed and variable costs in line with regulatory expectations (including labor and working capital management being in line with regulator's allowed collection cycles); or
- There is a history of a high level of project management execution in capital spending programs, including large one-time projects, almost invariably within regulatory allowances for timing and budget.

44. A regulated utility that warrants an Adequate assessment for operating efficiency relative to peers has a combination of cost position and efficiency factors that support profit sustainability combined with average volatility. Its cost structure is similar to its peers. It typically is characterized by a combination of the following factors:

- High safety performance;
- Service reliability is satisfactory with a track record of mostly meeting operating performance requirements of stakeholders, including those of regulators. We have confidence that a favorable performance against targets can be mostly sustained;
- Where applicable, the utility may be challenged to comply with current and future environmental standards that could increase in the medium term;
- Management maintains adequate cost control. Utilities that we assess as having adequate operating efficiency mostly manage their fixed and variable costs in line with regulatory expectations (including labor and working capital management being mostly in line with regulator's allowed collection cycles); or
- There is a history of adequate project management skills in capital spending programs within regulatory allowances for timing and budget.

45. A regulated utility that warrants a weak or weak/adequate assessment for operating efficiency relative to peers has a combination of cost position and efficiency factors that fail to support profit sustainability combined with below-average volatility. Its cost structure is worse than its peers. It typically is characterized by a combination of the following:

- Poor safety performance;
- Service reliability has been sporadic or non-existent with a track record of not meeting operating performance requirements of stakeholders, including those of regulators. We do not believe the utility can consistently meet performance targets without additional capital spending;
- Where applicable, the utility is challenged to comply with current environmental standards and is highly vulnerable to more onerous standards;
- Management typically exceeds operating costs authorized by regulators;
- Inconsistent project management skills as evidenced by cost overruns and delays including for maintenance capital spending; or
- The capital spending program is large and complex and falls into the weak or weak/adequate assessment, even if

operating efficiency is generally otherwise considered adequate.

### Profitability

46. A utility with above-average profitability would, relative to its peers, generally earn a rate of return at or above what regulators authorize and have minimal exposure to earnings volatility from affiliated unregulated business activities or market-sensitive regulated operations. Conversely, a utility with below-average profitability would generally earn rates of return well below the authorized return relative to its peers or have significant exposure to earnings volatility from affiliated unregulated business activities or market-sensitive regulated operations.

47. The profitability assessment consists of "level of profitability" and "volatility of profitability."

### Level of profitability

48. Key measures of general profitability for regulated utilities commonly include ratios, which we compare both with those of peers and those of companies in other industries to reflect different countries' regulatory frameworks and business environments:

- EBITDA margin,
- Return on capital (ROC), and
- Return on equity (ROE).

49. In many cases, EBITDA as a percentage of sales (i.e., EBITDA margin) is a key indicator of profitability. This is because the book value of capital does not always reflect true earning potential, for example when governments privatize or restructure incumbent state-owned utilities. Regulatory capital values can vary with those of reported capital because regulatory capital values are not inflation-indexed and could be subject to different assumptions concerning depreciation. In general, a country's inflation rate or required rate of return on equity investment is closely linked to a utility company's profitability. We do not adjust our analysis for these factors, because we can make our assessment through a peer comparison.

50. For regulated utilities subject to full cost-of-service regulation and return-on-investment requirements, we normally measure profitability using ROE, the ratio of net income available for common stockholders to average common equity. When setting rates, the regulator ultimately bases its decision on an authorized ROE. However, different factors such as variances in costs and usage may influence the return a utility is actually able to earn, and consequently our analysis of profitability for cost-of-service-based utilities centers on the utility's ability to consistently earn the authorized ROE.

51. We will use return on capital when pass-through costs distort profit margins--for instance congestion revenues or collection of third-party revenues. This is also the case when the utility uses accelerated depreciation of assets, which in our view might not be sustainable in the long run.

### Volatility of profitability

52. We may observe a clear difference between the volatility of actual profitability and the volatility of underlying regulatory profitability. In these cases, we could use the regulatory accounts as a proxy to judge the stability of earnings.

53. We use actual returns to calculate the standard error of regression for regulated utility issuers (only if there are at least

seven years of historical annual data to ensure meaningful results). If we believe recurring mergers and acquisitions or currency fluctuations affect the results, we may make adjustments.

## Part II--Financial Risk Analysis

### D. Accounting

54. Our analysis of a company's financial statements begins with a review of the accounting to determine whether the statements accurately measure a company's performance and position relative to its peers and the larger universe of corporate entities. To allow for globally consistent and comparable financial analyses, our rating analysis may include quantitative adjustments to a company's reported results. These adjustments also align a company's reported figures with our view of underlying economic conditions and give us a more accurate portrayal of a company's ongoing business. We discuss adjustments that pertain broadly to all corporate sectors, including this sector, in "Corporate Methodology: Ratios And Adjustments." Accounting characteristics and analytical adjustments unique to this sector are discussed below.

### Accounting characteristics

55. Some important accounting practices for utilities include:

- For integrated electric utilities that meet native load obligations in part with third-party power contracts, we use our purchased power methodology to adjust measures for the debt-like obligation such contracts represent (see below).
- Due to distortions in leverage measures from the substantial seasonal working-capital requirements of natural gas distribution utilities, we adjust inventory and debt balances by netting the value of inventory against outstanding short-term borrowings. This adjustment provides an accurate view of the company's balance sheet by reducing seasonal debt balances when we see a very high certainty of near-term cost recovery (see below).
- We deconsolidate securitized debt (and associated revenues and expenses) that has been accorded specialized recovery provisions (see below).
- For water utilities that report under U.K. GAAP, we adjust ratios for infrastructure renewals accounting, which permits water companies to capitalize the maintenance spending on their infrastructure assets (see below). The adjustments aim to make those water companies that report under U.K. GAAP more comparable to those that report under accounting regimes that do not permit infrastructure renewals accounting.

56. In the U.S. and selectively in other regions, utilities employ "regulatory accounting," which permits a rate-regulated company to defer some revenues and expenses to match the timing of the recognition of those items in rates as determined by regulators. A utility subject to regulatory accounting will therefore have assets and liabilities on its books that an unregulated corporation, or even regulated utilities in many other global regions, cannot record. We do not adjust GAAP earnings or balance-sheet figures to remove the effects of regulatory accounting. However, as more countries adopt International Financial Reporting Standards (IFRS), the use of regulatory accounting will become more scarce. IFRS does not currently provide for any recognition of the effects of rate regulation for financial reporting purposes, but it is considering the use of regulatory accounting. We do not anticipate altering our fundamental financial analysis of utilities because of the use or non-use of regulatory accounting. We will continue to analyze the effects of regulatory actions on a utility's financial health.

**Purchased power adjustment**

57. We view long-term purchased power agreements (PPA) as creating fixed, debt-like financial obligations that represent substitutes for debt-financed capital investments in generation capacity. By adjusting financial measures to incorporate PPA fixed obligations, we achieve greater comparability of utilities that finance and build generation capacity and those that purchase capacity to satisfy new load. PPAs do benefit utilities by shifting various risks to the electricity generators, such as construction risk and most of the operating risk. The principal risk borne by a utility that relies on PPAs is recovering the costs of the financial obligation in rates. (See "Standard & Poor's Methodology For Imputing Debt for U.S. Utilities' Power Purchase Agreements," May 7, 2007, for more background and information on the adjustment.)

58. We calculate the present value (PV) of the future stream of capacity payments under the contracts as reported in the financial statement footnotes or as supplied directly by the company. The discount rate used is the same as the one used in the operating lease adjustment, i.e., 7%. For U.S. companies, notes to the financial statements enumerate capacity payments for the coming five years, and a thereafter period. Company forecasts show the detail underlying the thereafter amount, or we divide the amount reported as thereafter by the average of the capacity payments in the preceding five years to get an approximation of annual payments after year five.

59. We also consider new contracts that will start during the forecast period. The company provides us the information regarding these contracts. If these contracts represent extensions of existing PPAs, they are immediately included in the PV calculation. However, a contract sometimes is executed in anticipation of incremental future needs, so the energy will not flow until some later period and there are no interim payments. In these instances, we incorporate that contract in our projections, starting in the year that energy deliveries begin under the contract. The projected PPA debt is included in projected ratios as a current rating factor, even though it is not included in the current-year ratio calculations.

60. The PV is adjusted to reflect regulatory or legislative cost-recovery mechanisms when present. Where there is no explicit regulatory or legislative recovery of PPA costs, as in most European countries, the PV may be adjusted for other mitigating factors that reduce the risk of the PPAs to the utility, such as a limited economic importance of the PPAs to the utility's overall portfolio.The adjustment reduces the debt-equivalent amount by multiplying the PV by a specific risk factor.

61. Risk factors based on regulatory or legislative cost recovery typically range between 0% and 50%, but can be as high as 100%. A 100% risk factor would signify that substantially all risk related to contractual obligations rests on the company, with no regulatory or legislative support. A 0% risk factor indicates that the burden of the contractual payments rests solely with ratepayers, as when the utility merely acts as a conduit for the delivery of a third party's electricity. These utilities are barred from developing new generation assets, and the power supplied to their customers is sourced through a state auction or third parties that act as intermediaries between retail customers and electricity suppliers. We employ a 50% risk factor in cases where regulators use base rates for the recovery of the fixed PPA costs. If a regulator has established a separate adjustment mechanism for recovery of all prudent PPA costs, a risk factor of 25% is employed. In certain jurisdictions, true-up mechanisms are more favorable and frequent than the review of base rates, but still do not amount to pure fuel adjustment clauses. Such mechanisms may be triggered by financial thresholds or passage of prescribed periods of time. In these instances, a risk factor between 25% and 50% is

employed. Specialized, legislatively created cost-recovery mechanisms may lead to risk factors between 0% and 15%, depending on the legislative provisions for cost recovery and the supply function borne by the utility. Legislative guarantees of complete and timely recovery of costs are particularly important to achieving the lowest risk factors. We also exclude short-term PPAs where they serve merely as gap fillers, pending either the construction of new capacity or the execution of long-term PPAs.

62. Where there is no explicit regulatory or legislative recovery of PPA costs, the risk factor is generally 100%. We may use a lower risk factor if mitigating factors reduce the risk of the PPAs on the utility. Mitigating factors include a long position in owned generation capacity relative to the utility's customer supply needs that limits the importance of the PPAs to the utility or the ability to resell power in a highly liquid market at minimal loss. A utility with surplus owned generation capacity would be assigned a risk factor of less than 100%, generally 50% or lower, because we would assess its reliance on PPAs as limited. For fixed capacity payments under PPAs related to renewable power, we use a risk factor of less than 100% if the utility benefits from government subsidies. The risk factor reflects the degree of regulatory recovery through the government subsidy.

63. Given the long-term mandate of electric utilities to meet their customers' demand for electricity, and also to enable comparison of companies with different contract lengths, we may use an evergreening methodology. Evergreen treatment extends the duration of short- and intermediate-term contracts to a common length of about 12 years. To quantify the cost of the extended capacity, we use empirical data regarding the cost of developing new peaking capacity, incorporating regional differences. The cost of new capacity is translated into a dollars-per-kilowatt-year figure using a proxy weighted-average cost of capital and a proxy capital recovery period.

64. Some PPAs are treated as operating leases for accounting purposes--based on the tenor of the PPA or the residual value of the asset on the PPA's expiration. We accord PPA treatment to those obligations, in lieu of lease treatment; rather, the PV of the stream of capacity payments associated with these PPAs is reduced to reflect the applicable risk factor.

65. Long-term transmission contracts can also substitute for new generation, and, accordingly, may fall under our PPA methodology. We sometimes view these types of transmission arrangements as extensions of the power plants to which they are connected or the markets that they serve. Accordingly, we impute debt for the fixed costs associated with such transmission contracts.

66. Adjustment procedures:

- Data requirements:
- Future capacity payments obtained from the financial statement footnotes or from management.
- Discount rate: 7%.
- Analytically determined risk factor.

- Calculations:
- Balance sheet debt is increased by the PV of the stream of capacity payments multiplied by the risk factor.
- Equity is not adjusted because the recharacterization of the PPA implies the creation of an asset, which offsets the debt.
- Property, plant, and equipment and total assets are increased for the implied creation of an asset equivalent to the

debt.

- An implied interest expense for the imputed debt is determined by multiplying the discount rate by the amount of imputed debt (or average PPA imputed debt, if there is fluctuation of the level), and is added to interest expense.
- We impute a depreciation component to PPAs. The depreciation component is determined by multiplying the relevant year's capacity payment by the risk factor and then subtracting the implied PPA-related interest for that year. Accordingly, the impact of PPAs on cash flow measures is tempered.
- The cost amount attributed to depreciation is reclassified as capital spending, thereby increasing operating cash flow and funds from operations (FFO).
- Some PPA contracts refer only to a single, all-in energy price. We identify an implied capacity price within such an all-in energy price, to determine an implied capacity payment associated with the PPA. This implied capacity payment is expressed in dollars per kilowatt-year, multiplied by the number of kilowatts under contract. (In cases that exhibit markedly different capacity factors, such as wind power, the relation of capacity payment to the all-in charge is adjusted accordingly.)
- Operating income before depreciation and amortization (D&A) and EBITDA are increased for the imputed interest expense and imputed depreciation component, the total of which equals the entire amount paid for PPA (subject to the risk factor).
- Operating income after D&A and EBIT are increased for interest expense.

### Natural gas inventory adjustment

67. In jurisdictions where a pass-through mechanism is used to recover purchased natural gas costs of gas distribution utilities within one year, we adjust for seasonal changes in short-debt tied to building inventories of natural gas in non-peak periods for later use to meet peak loads in peak months. Such short-term debt is not considered to be part of the utility's permanent capital. Any history of non-trivial disallowances of purchased gas costs would preclude the use of this adjustment. The accounting of natural gas inventories and associated short-term debt used to finance the purchases must be segregated from other trading activities.

68. Adjustment procedures:

- Data requirements:
- Short-term debt amount associated with seasonal purchases of natural gas devoted to meeting peak-load needs of captive utility customers (obtained from the company).

- Calculations:
- Adjustment to debt--we subtract the identified short-term debt from total debt.

### Securitized debt adjustment

69. For regulated utilities, we deconsolidate debt (and associated revenues and expenses) that the utility issues as part of a securitization of costs that have been segregated for specialized recovery by the government entity constitutionally authorized to mandate such recovery if the securitization structure contains a number of protective features:

- An irrevocable, non-bypassable charge and an absolute transfer and first-priority security interest in transition property;
- Periodic adjustments ("true-up") of the charge to remediate over- or under-collections compared with the debt service obligation. The true-up ensures collections match debt service over time and do not diverge significantly in the short run; and,
- Reserve accounts to cover any temporary short-term shortfall in collections.

70. Full cost recovery is in most instances mandated by statute. Examples of securitized costs include "stranded costs" (above-market utility costs that are deemed unrecoverable when a transition from regulation to competition occurs) and unusually large restoration costs following a major weather event such as a hurricane. If the defined features are present, the securitization effectively makes all consumers responsible for principal and interest payments, and the utility is simply a pass-through entity for servicing the debt. We therefore remove the debt and related revenues and expenses from our measures. (See "Securitizing Stranded Costs," Jan. 18, 2001, for background information.)

71. Adjustment procedures:

- Data requirements:
- Amount of securitized debt on the utility's balance sheet at period end;
- Interest expense related to securitized debt for the period; and
- Principal payments on securitized debt during the period.

- Calculations:
- Adjustment to debt: We subtract the securitized debt from total debt.
- Adjustment to revenues: We reduce revenue allocated to securitized debt principal and interest. The adjustment is the sum of interest and principal payments made during the year.
- Adjustment to operating income after depreciation and amortization (D&A) and EBIT: We reduce D&A related to the securitized debt, which is assumed to equal the principal payments during the period. As a result, the reduction to operating income after D&A is only for the interest portion.
- Adjustment to interest expense: We remove the interest expense of the securitized debt from total interest expense.

- Operating cash flows:
- We reduce operating cash flows for revenues and increase for the assumed interest amount related to the securitized debt. This results in a net decrease to operating cash flows equal to the principal repayment amount.

### Infrastructure renewals expenditure

72. In England and Wales, water utilities can report under either IFRS or U.K. GAAP. Those that report under U.K. GAAP are allowed to adopt infrastructure renewals accounting, which enables the companies to capitalize the maintenance spending on their underground assets, called infrastructure renewals expenditure (IRE). Under IFRS, infrastructure renewals accounting is not permitted and maintenance expenditure is charged to earnings in the year incurred. This difference typically results in lower adjusted operating cash flows for those companies that report maintenance expenditure as an operating cash flow under IFRS, than for those that report it as capital expenditure under U.K. GAAP. We therefore make financial adjustments to amounts reported by water issuers that apply U.K. GAAP, with the aim of making ratios more comparable with those issuers that report under IFRS and U.S. GAAP. For example, we deduct IRE from EBITDA and FFO.

73. IRE does not always consist entirely of maintenance expenditure that would be expensed under IFRS. A portion of IRE can relate to costs that would be eligible for capitalization as they meet the recognition criteria for a new fixed asset set out in International Accounting Standard 16 that addresses property, plant, and equipment. In such cases, we may refine our adjustment to U.K. GAAP companies so that we only deduct from FFO the portion of IRE that would not be capitalized under IFRS. However, the information to make such a refinement would need to be of high quality, reliable, and ideally independently verified by a third party, such as the company's auditor. In the absence of this, we assume

that the entire amount of IRE would have been expensed under IFRS and we accordingly deduct the full expenditure from FFO.

74. Adjustment procedures:

- Data requirements:
- U.K. GAAP accounts typically provide little information on the portion of capital spending that relates to renewals accounting, or the related depreciation, which is referred to as the infrastructure renewals charge. The information we use for our adjustments is, however, found in the regulatory cost accounts submitted annually by the water companies to the Water Services Regulation Authority, which regulates all water companies in England and Wales.

- Calculations:
- EBITDA: Reduced by the value of IRE that was capitalized in the period.
- EBIT: Adjusted for the difference between the adjustment to EBITDA and the reduction in the depreciation expense, depending on the degree to which the actual cash spending in the current year matches the planned spending over the five-year regulatory review period.
- Cash flow from operations and FFO: Reduced by the value of IRE that was capitalized in the period.
- Capital spending: Reduced by the value of infrastructure renewals spending that we reclassify to cash flow from operations.
- Free operating cash flow: No impact, as the reduction in operating cash flows is exactly offset by the reduction in capital spending.

### E. Cash flow/leverage analysis

75. In assessing the cash flow adequacy of a regulated utility, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology"). We assess cash flow/leverage on a six-point scale ranging from ('1') minimal to ('6') highly leveraged. These scores are determined by aggregating the assessments of a range of credit ratios, predominantly cash flow-based, which complement each other by focusing attention on the different levels of a company's cash flow waterfall in relation to its obligations.

76. The corporate methodology provides benchmark ranges for various cash flow ratios we associate with different cash flow leverage assessments for standard volatility, medial volatility, and low volatility industries. The tables of benchmark ratios differ for a given ratio and cash flow leverage assessment along two dimensions: the starting point for the ratio range and the width of the ratio range.

77. If an industry's volatility levels are low, the threshold levels for the applicable ratios to achieve a given cash flow leverage assessment are less stringent, although the width of the ratio range is narrower. Conversely, if an industry has standard levels of volatility, the threshold levels for the applicable ratios to achieve a given cash flow leverage assessment may be elevated, but with a wider range of values.

78. We apply the "low-volatility" table to regulated utilities that qualify under the corporate criteria and with all of the following characteristics:

- A vast majority of operating cash flows come from regulated operations that are predominantly at the low end of the utility risk spectrum (e.g., a "network," or distribution/transmission business unexposed to commodity risk and with very low operating risk);
- A "strong" regulatory advantage assessment;

- An established track record of normally stable credit measures that is expected to continue;
- A demonstrated long-term track record of low funding costs (credit spread) for long-term debt that is expected to continue; and
- Non-utility activities that are in a separate part of the group (as defined in our group rating methodology) that we consider to have "nonstrategic" group status and are not deemed high risk and/or volatile.

79. We apply the "medial volatility" table to companies that do not qualify under paragraph 78 with:

- A majority of operating cash flows from regulated activities with an "adequate" or better regulatory advantage assessment; or
- About one-third or more of consolidated operating cash flow comes from regulated utility activities with a "strong" regulatory advantage and where the average of its remaining activities have a competitive position assessment of '3' or better.

80. We apply the "standard-volatility" table to companies that do not qualify under paragraph 79 and with either:

- About one-third or less of its operating cash flow comes from regulated utility activities, regardless of its regulatory advantage assessment; or
- A regulatory advantage assessment of "adequate/weak" or "weak."

## Part III--Rating Modifiers

### F. Diversification/portfolio effect

81. In assessing the diversification/portfolio effect on a regulated utility, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

### G. Capital structure

82. In assessing the quality of the capital structure of a regulated utility, we use the same methodology as with other corporate issuers (see "Corporate Methodology").

### H. Liquidity

83. In assessing a utility's liquidity/short-term factors, our analysis is consistent with the methodology that applies to corporate issuers (See "Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers," Nov. 19, 2013) except for the standards for "adequate" liquidity set out in paragraph 84 below.

84. The relative certainty of financial performance by utilities operating under relatively predictable regulatory monopoly frameworks make these utilities attractive to investors even in times of economic stress and market turbulence compared to conventional industrials. For this reason, utilities with business risk profiles of at least "satisfactory" meet our definition of "adequate" liquidity based on a slightly lower ratio of sources to uses of funds of 1.1x compared with the standard 1.2x. Also, recognizing the cash flow stability of regulated utilities we allow more discretion when calculating covenant headroom. We consider that utilities have adequate liquidity if they generate positive sources over uses, even if forecast EBITDA declines by 10% (compared with the 15% benchmark for corporate issuers) before covenants are breached.

### I. Financial policy

85. In assessing financial policy on a regulated utility, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

### J. Management and governance

86. In assessing management and governance on a regulated utility, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

### K. Comparable ratings analysis

87. In assessing the comparable ratings analysis on a regulated utility, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

## Appendix--Frequently Asked Questions

### Does Standard & Poor's expect that the business strategy modifier to the preliminary regulatory advantage will be used extensively?

88. Globally, we expect management's influence will be neutral in most jurisdictions. Where the regulatory assessment is "strong," it is less likely that a negative business strategy modifier would be used due to the nature of the regulatory regime that led to the "strong" assessment in the first place. Utilities in "adequate/weak" and "weak" regulatory regimes are challenged to outperform due to the uncertainty of such regulatory regimes. For a positive use of the business strategy modifier, there would need to be a track record of the utility consistently outperforming the parameters laid down under a regulatory regime, and we would need to believe this could be sustained. The business strategy modifier is most likely to be used when the preliminary regulatory advantage assessment is "strong/adequate" because the starting point in the assessment is reasonably supportive, and a utility has shown it manages regulatory risk better or worse than its peers in that regulatory environment and we expect that advantage or disadvantage will persist. An example would be a utility that can consistently earn or exceed its authorized return in a jurisdiction where most other utilities struggle to do so. If a utility is treated differently by a regulator due to perceptions of poor customer service or reliability and the "operating efficiency" component of the competitive position assessment does not fully capture the effect on the business risk profile, a negative business strategy modifier could be used to accurately incorporate it into our analysis. We expect very few utilities will be assigned a "very negative" business strategy modifier.

### Does a relatively strong or poor relationship between the utility and its regulator compared with its peers in the same jurisdiction necessarily result in a positive or negative adjustment to the preliminary regulatory advantage assessment?

89. No. The business strategy modifier is used to differentiate a company's regulatory advantage within a jurisdiction where we believe management's business strategy has and will positively or negatively affect regulatory outcomes beyond what is typical for other utilities in that jurisdiction. For instance, in a regulatory jurisdiction where allowed returns are negotiated rather than set by formula, a utility that is consistently authorized higher returns (and is able to earn that return) could warrant a positive adjustment. A management team that cannot negotiate an approved capital spending program to improve its operating performance could be assessed negatively if its performance lags behind peers in the same regulatory jurisdiction.

**What is your definition of regulatory jurisdiction?**

90. A regulatory jurisdiction is defined as the area over which the regulator has oversight and could include single or multiple subsectors (water, gas, and power). A geographic region may have several regulatory jurisdictions. For example, the Office of Gas and Electricity Markets and the Water Services Regulation Authority in the U.K. are considered separate regulatory jurisdictions. In Ontario, Canada, the Ontario Energy Board represents a single jurisdiction with regulatory oversight for power and gas. Also, in Australia, the Australian Energy Regulator would be considered a single jurisdiction given that it is responsible for both electricity and gas transmission and distribution networks in the entire country, with the exception of Western Australia.

**Are there examples of different preliminary regulatory advantage assessments in the same country or jurisdiction?**

91. Yes. In Israel we rate a regulated integrated power utility and a regulated gas transmission system operator (TSO). The power utility's relationship with its regulator is extremely poor in our view, which led to significant cash flow volatility in a stress scenario (when terrorists blew up the gas pipeline that was then Israel's main source of natural gas, the utility was unable to negotiate compensation for expensive alternatives in its regulated tariffs). We view the gas TSO's relationship with its regulator as very supportive and stable. Because we already reflected this in very different preliminary regulatory advantage assessments, we did not modify the preliminary assessments because the two regulatory environments in Israel differ and were not the result of the companies' respective business strategies.

**How is regulatory advantage assessed for utilities that are a natural monopoly but are not regulated by a regulator or a specific regulatory framework, and do you use the regulatory modifier if they achieve favorable treatment from the government as an owner?**

92. The four regulatory pillars remain the same. On regulatory stability we look at the stability of the setup, with more emphasis on the historical track record and our expectations regarding future changes. In tariff-setting procedures and design we look at the utility's ability to fully recover operating costs, investments requirements, and debt-service obligations. In financial stability we look at the degree of flexibility in tariffs to counter volume risk or commodity risk. The flexibility can also relate to the level of indirect competition the utility faces. For example, while Nordic district heating companies operate under a natural monopoly, their tariff flexibility is partly restricted by customers' option to change to a different heating source if tariffs are significantly increased. Regulatory independence and insulation is mainly based on the perceived risk of political intervention to change the setup that could affect the utility's credit profile. Although political intervention tends to be mostly negative, in certain cases political ties due to state ownership might positively influence tariff determination. We believe that the four pillars effectively capture the benefits from the close relationship between the utility and the state as an owner; therefore, we do not foresee the use of the regulatory modifier.

**In table 1, when describing a "strong" regulatory advantage assessment, you mention that there is support of cash flows during construction of large projects, and preapproval of capital investment programs and large projects lowers the risk of subsequent disallowances of capital costs. Would this preclude a "strong" regulatory advantage assessment in jurisdictions where those practices are absent?**

93. No. The table is guidance as to what we would typically expect from a regulatory framework that we would assess as "strong." We would expect some frameworks with no capital support during construction to receive a "strong" regulatory advantage assessment if in aggregate the other factors we analyze support that conclusion.

## RELATED CRITERIA AND RESEARCH

- Corporate Methodology, Nov. 19, 2013
- Group Rating Methodology, Nov. 19, 2013
- Methodology: Industry Risk, Nov. 19, 2013
- Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- Ratings Above The Sovereign--Corporate And Government Ratings: Methodology And Assumptions, Nov. 19, 2013
- Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Nov. 19, 2013
- Collateral Coverage And Issue Notching Rules For '1+' And '1' Recovery Ratings On Senior Bonds Secured By Utility Real Property, Feb. 14, 2013
- Methodology: Management And Governance Credit Factors For Corporate Entities and Insurers, Nov. 13, 2012
- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011
- General Criteria: Rating Government-Related Entities: Methodology And Assumptions, Dec. 9, 2010



These criteria represent the specific application of fundamental principles that define credit risk and ratings opinions. Their use is determined by issuer- or issue-specific attributes as well as Standard & Poor's Ratings Services' assessment of the credit and, if applicable, structural risks for a given issuer or issue rating. Methodology and assumptions may change from time to time as a result of market and economic conditions, issuer- or issue-specific factors, or new empirical evidence that would affect our credit judgment.