

APPENDIX E

Testimony and Exhibits of Richard L. Ansaldo

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

New York Power Authority) Docket No. ER16-____-000

PREPARED DIRECT TESTIMONY OF RICHARD L. ANSALDO

ON BEHALF OF

NEW YORK POWER AUTHORITY

JANUARY 29, 2016

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RICHARD L. ANSALDO**

1 **Q. Please state your name and business address.**

2 A. Richard L. Ansaldo, P.O. Box 2542, Albany, NY 12220.

3 **Q. By whom are you employed and in what capacity?**

4 A. I am a self-employed financial utility consultant. In this proceeding I am working with
5 the consulting firm Nexant, Inc. and representing the New York Power Authority
6 ("NYPA" or "Authority"). My experience, background and qualifications are provided as
7 Exhibit No. PA-302.

8 **Purpose of Testimony**

9 **Q. What is the purpose of your testimony?**

10 A. My testimony provides support for (i) NYPA's requested 8.65% base return on equity
11 ("ROE") and total ROE of 9.15% (including 50 basis points for participation in the New
12 York Independent System Operator, Inc. ("NYISO"), a regional transmission
13 organization ("RTO")); and (ii) NYPA's proposal to use its actual capital structure,
14 capped at 60% equity. The ROE and capital structure are components of the overall rate

of return (“ROR”) that NYPA will earn on its transmission rate base through the formula rate (“Formula Rate”), which NYPA proposes to adopt in this filing.

Overview Of Return On Equity For NYPA

Q. What is the overall guiding principle that determines the standard for setting a fair and reasonable return on equity that should apply to NYPA?

A. First, and fundamentally, a reasonable ROE for NYPA should comply with the standards established by the U.S. Supreme Court in the *Hope* and *Bluefield* decisions for determining a fair and reasonable allowed ROE, which include consistency of the allowed return with other businesses having similar risk and the adequacy of the return to provide access to capital markets and support credit quality, with the end result leading to reasonable rate levels for customers. *See Federal Power Comm. v. Hope Nat. Gas Co.*, 320 U.S. 591, 603 (1944); *Bluefield Water Works and Improvement Co. v. Public Serv. Comm. of W. Va.*, 262 U.S. 679, 692-93 (1923).

Q. Please discuss any factors that are particularly relevant in setting a reasonable ROE for NYPA’s transmission system, compared to setting an ROE for an investor-owned utility (“IOU”).

A. As a New York State authority, NYPA is a special-purpose government entity whose mission is to provide clean, low-cost and reliable energy consistent with safety and a clean environment, while promoting economic and job development, energy efficiency, renewable energy, and innovation for the benefit of its customers and all New York residents. NYPA is just like an IOU when it comes to the need to establish its own credit rating and to access capital markets. NYPA receives no tax revenues or “credits” from

1 New York State. It finances its projects on its own with internally generated funds and
2 bond sale proceeds from private investors. NYPA does not have traditional common
3 stock and its equity is retained income stated on its financial statements as “net position.”
4 NYPA has its own bond rating, currently “AA” with Standard & Poor’s (“S&P”) and
5 “Aa1” with Moody’s Investors Service (“Moody’s”). NYPA’s bonds are not guaranteed
6 by New York State (which, incidentally, is also rated “AA” by the major rating agencies).
7 Accordingly, NYPA must maintain its own financial integrity through its own revenues.
8 NYPA is a major state authority, with about \$1.6 billion of debt outstanding. NYPA must
9 maintain a safety margin over and above its interest costs, just like an IOU, in order to
10 provide debt investors the assurance that they will be paid principal and interest on a
11 timely basis. NYPA’s ROE, *i.e.*, the return on its net position, as well as its equity ratio,
12 provide that safety margin needed to maintain its financial integrity and bond rating. But
13 unlike an IOU, NYPA pays no income tax to either the Federal Government or New York
14 State. As a result, the equity portion of its overall ROR—the ROE—is not “grossed up”
15 for taxes. Thus, the overall ROR of 7.38% produced by the Formula Rate during the
16 initial rate year, as seen in Exhibit No. PA-303, p. 5, provides the entirety of NYPA’s
17 transmission-related earnings that debt investors and bond rating firms will evaluate as
18 coverage for debt financing. On the other hand, in the case of an IOU, part of the safety
19 margin evaluated by ratings agencies is provided by the income tax allowance, which is
20 an additional component of the revenue requirement and is included in the earnings
21 before interest, taxes, depreciation, and amortization metric utilized by some ratings
22 agencies. For IOUs, recovery of an income tax allowance “cushions” the impact of

unexpected expenses, and reduces risk for the business entity and its investors.

Q. Has FERC recognized that municipal and government-owned transmission systems have an investment risk similar to those owned by IOUs?

A. Yes. In FERC Opinion No. 479, issued on April 19, 2005 and related orders involving the City of Vernon (“Vernon”), FERC stated that Vernon’s ROE could be set by reference to the market-based return for similarly-rated entities. *See generally City of Vernon*, 111 FERC ¶ 61,092 at PP 84-103 (2005). FERC’s finding comports with financial theory. The risk of a particular investment is not determined by the type of entity that makes the investment; rather, the risk is determined by the risk of the particular investment. NYPA’s business risk in developing and modernizing the New York State transmission system is no different than that of an IOU. In the Midcontinent Independent System Operator, Inc. (“MISO”) region, municipal transmission owners are entitled to earn the same 12.38% cost of equity as IOU transmission owners are entitled to earn as their ROE. *See Midwest Indep. Transm. Sys. Operator, Inc.*, 100 FERC ¶ 61,292 (2002), *reh’g denied*, 102 FERC ¶ 61,143 (2003), *on appeal*, *Public Serv. Comm. of the C’wealth of Ky. v. FERC*, 397 F.3d 1004 (D.C. Cir. 2005), *on remand*, 111 FERC ¶ 61,355 (2005).

Q. Does NYPA face any current circumstances in which it will need to access the capital markets for debt?

A. Yes. As discussed in the testimony of Mr. Scott Tetenman, NYPA’s Vice President of Finance (Exhibit No. PA-101), NYPA is embarking on a capital spending program to maintain and modernize its transmission system. NYPA needs a substantial amount of new borrowing to fulfill these objectives before 2020.

Cost of Equity Determination

Q. In FERC Opinion No. 531, the Commission continued to rely on the discounted cash flow (“DCF”) method, with some refinements, to estimate the allowed rate of return on equity. Can you briefly explain the DCF method?

A. The DCF method to estimate the cost of equity is grounded on the truism that investors price a stock based upon the present value of the stock’s future cash flows, which translates into the present value of dividends and/or the stock’s sale value into the infinite time horizon. It is a particularly useful model for dividend-paying entities like IOUs, where the current yield can be accurately estimated, and estimating investors’ assessment of growth expectations can be reasonably determined from publicly available data. Public utilities are mostly regulated, and their earnings levels are constrained to reasonable levels, based upon the risks they undertake.

The DCF formula is:

$$k = D/P + g$$

Where: k = the estimate of investors’ required return;

D = the annual dividend (over the next 12 months and sometimes expressed as D1, estimated under the FERC method by increasing the average yield over the past six months, and increasing that yield by ½ the growth rate to arrive at the adjusted dividend yield);

P = the stock price (in practice at FERC, the 6-month average of the high and low stock prices, each month) and;

g = The expected growth rate of dividends per share (at FERC, the weighted average of IBES short-term 5-year growth (weighted 2/3rds) and GDP for long-term growth (weighted 1/3rd)).

Q. Can you explain how you developed the base ROE of 8.65% for NYPA?

1 A. Yes. I followed the two-step DCF methodology that FERC adopted in Opinion No. 531,
2 which was issued on June 19, 2014.¹ In Opinion No. 531, FERC found that “the ROE in
3 th[at] proceeding, as well as in future public utility cases, should be based on the same
4 DCF methodology the Commission has used in natural gas pipeline and oil pipeline cases
5 for many years—the two-step, constant growth DCF methodology, or two-step DCF
6 methodology.”² I have outlined the steps of the new method for electric utilities that were
7 detailed in Opinion No. 531 and included them in Exhibit No. PA-303, pp. 1-2.

8 **Q. How did you develop the proxy group for your DCF analysis?**

9 A. NYPA’s credit ratings of “AA” from S&P and “Aa1” from Moody’s are unmatched
10 among the approximately 40 primarily domestic U.S. market-traded electric utility
11 common stocks followed by Value Line, and no utility followed by Value Line is within
12 a single credit rating notch of NYPA using both S&P and Moody’s ratings. In fact, there
13 is only one electric utility, Madison Gas & Electric Company, within a single credit
14 rating notch of NYPA using *either* S&P or Moody’s credit ratings. Therefore, arriving at
15 an adequately-sized proxy group required expanding the selection criteria beyond the
16 criteria described in Opinion No. 531 to include utilities that had (i) a rating of “A-” or
17 better from S&P, or (ii) a rating of “A3” or better from Moody’s. (Exhibit No. PA-303, p.
18 4). Application of this screening process narrowed the universe of utilities followed by

¹ *Martha Coakley, Mass. Atty. General, et al. v. Bangor Hydro-Elec. Co., et al.*, Opinion No. 531, 147 FERC ¶ 61,234 (issued June 19, 2014), *order on paper hearing*, Opinion No. 531-A, 149 FERC ¶ 61,032 (2014), *order on reh’g*, Opinion No. 531-B, 150 FERC ¶ 61,165 (2015).

² *Id.* at P 13 (footnote omitted).

1 Value Line to a group of the 25 highest-rated electric utilities. Six of the 25 utilities
2 meeting the credit screening criteria (at least A- by S&P and/or at least A3 by Moody's)
3 needed to be excluded from the proxy group due to merger and acquisition activity during
4 the study period that in my opinion resulted in a material impact on DCF inputs: CLECO
5 Corporation was and remains a takeover target of Macquarie Infrastructure; Duke Energy
6 is acquiring Piedmont Natural Gas; NextEra Energy has a pending acquisition of
7 Hawaiian Electric; PPL Corporation was involved in a spinoff of power generation and
8 has the majority of its income generated from operations in the United Kingdom;
9 Southern Company has plans to acquire AGL resources; and, WEC Energy's acquisition
10 of Integrys Energy was still pending during the six month period ending November 2015.
11 The Value Line reports for the six excluded utilities are included as Exhibit No. PA-308
12 and describes in greater detail the relevant merger and acquisition activity identified
13 above. Exclusion of these six utilities left a group of 19 utilities, which are listed on
14 Exhibit No. PA-303, p. 4, and which comprise my final proxy group. Value Line reports
15 for these 19 utilities are included in Exhibit No. PA-307, which I used to reference
16 achieved ROE levels and forecasted ROE levels for comparative purposes. The 19
17 companies included in Exhibit No. PA-307 are NYPA's closest risk-comparable analogs.
18 Also, as is fundamental to the DCF method, all utilities needed to be paying dividends
19 during the six-month study period, which is the case here. I then followed the steps for
20 estimating the ROE per Opinion No. 531, as outlined in Exhibit No. PA-303, pp. 1-2.

21 **Q. Please discuss the steps you used to determine the proposed ROE and the results of**
22 **this analysis.**

1 A. Once the proxy group of 19 utilities was selected, I gathered daily stock prices and
2 dividend data over the 6-month period ended November 30, 2015. The stock price and
3 dividend data are shown in Exhibit Nos. PA-309 and 310. Also, as indicated in Opinion
4 No. 531 at PP 88-90, I used Yahoo Finance as a source for analysts' 5-year short-term
5 growth IBES projections as of November 30, 2015, which is weighted $2/3^{\text{rds}}$ to determine
6 the DCF growth rate in accordance with Opinion No. 531. The analyst growth data is
7 shown in Exhibit No. PA-303, p. 11. The long-term growth projection, based upon three
8 data sources for GDP growth, were estimated based upon the best current information as
9 shown in Exhibit No. PA-303, p. 10, and weighted $1/3^{\text{rd}}$ to determine the DCF growth
10 rate. In accordance with Opinion No. 531, the dividend yield determined by the monthly
11 average High-Low stock price was increased by $1/2$ the growth rate to arrive at the
12 investors' expected yield over the next 12 months. The addition of the resulting yield and
13 growth results in the total DCF return for each entity in the proxy group. I note that
14 Edison International needed to be eliminated under Opinion No. 531, because its stand-
15 alone estimated 3.98% cost of equity estimate is so low as to fail tests of reasonableness
16 and economic logic. Moreover, the ROE is less than the bond yield plus 100 basis points
17 (See Exhibit No. 303, p. 7), which indicates that it is a low-end outlier. The distribution
18 of the proxy group also indicates that Edison International is a low-end outlier, because
19 there is a 239 basis-point break in the distribution between Edison International's 3.98%
20 and the next-lowest ROE of 6.37%. The proxy group—excluding Edison International as
21 a low-end outlier—produces a range of reasonable returns of 6.37% to 10.29%, with a
22 median return of 8.65% (Exhibit No. PA-303, p. 3). This analysis supports NYPA's

1 requested base ROE of 8.65%, which is equivalent to the median return, consistent with
2 FERC precedent. After including a 50 basis point incentive for participation in the
3 NYISO, the total authorized ROE should be 9.15%, well within the 10.29% top end of
4 the zone of reasonableness established by the FERC DCF analysis (Exhibit No. PA-303,
5 p. 3).

6 **Q. Is NYPA seeking an upward adjustment from the measure of central tendency**
7 **based on anomalous market conditions, consistent with the Commission's Opinion**
8 **No. 531?**

9 No. An adjustment to the halfway point of the upper end of the zone of reasonableness,
10 if used here, would raise NYPA's base ROE to 9.47%. While market conditions remain
11 anomalous, as I discuss below, NYPA has elected not to request the upward adjustment
12 in this filing. Instead, NYPA conservatively asks that its base ROE be set at the median
13 of 8.65% based upon the 19 company proxy group. Use of the median as a measure of
14 central tendency for a single utility is consistent with FERC precedent. *Southern*
15 *California Edison Co.*, 131 FERC ¶ 61,020 at P 92 (2010), *order on reh'g*, 137 FERC ¶
16 61,015 at PP 17-25 (2011).

17 **Q. Are capital market conditions currently similar to what they were when Opinion**
18 **No. 531 was issued, which could justify placement of the ROE higher within the**
19 **range of reasonableness?**

20 A. Yes. The overall context for FERC's adjustment to move up from the measure of central
21 tendency in Opinion No. 531 was that the resulting DCF returns produced by current
22 market data did not provide a reasonable assurance that the financial integrity standards
23 of *Hope* and *Bluefield* could be met. The FERC DCF method is currently producing very

1 similar results based upon market data through November 30, 2015 as it did in Opinion
2 No. 531. This can be seen in Exhibit No. PA-303, p. 8, where I compiled the DCF
3 returns from Opinion No. 531, Appendix, pp. 82-83 for the utilities that are common to
4 the 19 company proxy group. As can be seen, the median returns are similar: 8.82%
5 using updated data to November 30, 2015 vs. 9.11% in Opinion No. 531. Additionally,
6 as can be seen in Exhibit No. PA-303, p. 6, there is very little difference in the Treasury
7 Yields that prevailed in the study period for Opinion No. 531 and those used in this filing
8 for the 6 months ending November 30, 2015. These metrics would provide strong
9 support for an upward adjustment from the median ROE to reflect anomalous market
10 conditions; however, NYPA is not requesting the upward adjustment and instead
11 conservatively asks that its base ROE be set at the median of 8.65% based upon the 19
12 company proxy group.

13 **Q. Does your recommended ROE of 9.15%, after the 50 basis point incentive for**
14 **ISO/RTO participation, provide a just and reasonable return?**

15 A. Yes, but in combination with NYPA's voluntary cap on its equity capitalization of 60%,
16 the overall rate of return is at the lower end of a range of what I would consider just and
17 reasonable. As discussed in Opinion No. 531, the overall goal of the allowed equity
18 return is to meet the requirements of the *Hope* and *Bluefield* cases, which include being
19 fair to customers and at the same time maintaining the entity's financial integrity.
20 Considering the electric grid policy actions of New York State and the need of NYPA's
21 customers to access low-cost power, it is beneficial for NYPA to maintain its
22 "AA"/"Aa1" bond rating. The 8.65% ROE for the transmission system (9.15% with the

1 ISO incentive) produces an overall return of 7.38% during the initial rate year when
2 combined with NYPA's cost of long-term debt of 4.72% and voluntary equity ratio cap
3 of 60%. That overall return is about 25% lower than the pre-tax return of an IOU, and
4 credit metrics are evaluated based upon the return including the tax cushion. NYPA's
5 "AA/Aa1" bond rating was achieved in the context of historically low debt leverage. As
6 shown in Exhibit No. PA-303, p. 9, NYPA's actual equity capitalization for the four year
7 period ending 2014 was 72% and its 2014 equity ratio was 76.4%. By voluntarily
8 offering to skew its equity capitalization for ratemaking purposes to reflect greater debt
9 leverage, NYPA is providing ratepayers with the dual advantages of (i) a lower overall
10 rate of return produced by the artificially low equity capitalization; and (ii) a lower cost
11 of long-term debt produced by historically low actual leverage ratios and NYPA's
12 resulting superior credit rating.

13 **Q. How does NYPA's proposed ROE of 9.15% compare to the ROEs allowed to other**
14 **utilities and achieved and expected returns in the industry and how is the**
15 **comparison relevant?**

16 A. The proposed ROE of 9.15% is lower than the average allowed returns, achieved returns,
17 and expected returns of the average utility. For example, the Regulatory Focus report on
18 Major Rate Case Decisions included as Exhibit No. PA-304 shows that nationally
19 allowed ROEs have averaged 10.01% for the period of January 1 to September 30, 2015.
20 In terms of achieved and expected returns, the 9.15% is also lower than the data reported
21 by Value Line and summarized in my Exhibit No. 303, p. 4, where average ROEs are in
22 the 10.08% to 11.11% range. The comparison is relevant because NYPA's requested

1 ROE is lower than the allowed returns in the industry, the achieved returns in the
2 industry, and the expected returns in the industry. As will be shown later, NYPA's
3 overall ROR, including the effect of its 60% equity ratio cap, is comparable to the overall
4 ROR in the industry on an after tax basis, and 25% below the ROR in the industry when
5 income taxes are taken into account. As a result, NYPA's "AA"/"Aa1" bond rating does
6 not come at an increased cost to its customers.

7 **Q. What is the importance of the allowed ROE to NYPA?**

8 A. The ROE provides the entire basis for NYPA's ability to have retained earnings, which,
9 in turn, is the basis for its credit quality and ability to raise debt. The allowed ROE from
10 its transmission assets will constitute an increasing portion of its overall ROE as the
11 modernization program continues. Since NYPA is a state authority and does not have
12 traditional "common stock," it has no access to new equity markets. Its sole source of
13 new financing is the cash flow from its retained earnings, depreciation, and new bond
14 financing. As already discussed, its ability to maintain its bond rating is entirely
15 dependent on its equity return and the level of equity in its capital structure because it has
16 no income tax cushion like an IOU. Yet the transmission projects that NYPA undertakes
17 have a similar risk to those of an IOU. NYPA requires a reasonable ROE in order to
18 maintain its financial integrity and ability to maintain its credit rating. All electricity
19 consumers in the State are best served if NYPA maintains its credit rating, and any funds
20 provided by the cash flow from the equity return are reinvested in New York State's
21 energy infrastructure and programs.

1 **Q. Does the 50 basis point incentive proposed by NYPA conform to precedent**
2 **established by FERC in other proceedings?**

3 A. Yes. Based on membership in an ISO/RTO, FERC has consistently granted utilities a 50
4 basis point upward adjustment to the base ROE in recognition of the region-wide benefits
5 of turning operational control over transmission facilities to an ISO and for the utility's
6 continued involvement with such organization. *See, e.g., Niagara Mohawk Power Corp.*,
7 124 FERC ¶ 61,106 at P 35 (2008), *order on reh'g*, 126 FERC ¶ 61,173 (2009). Also,
8 the Commission has noted that the 50 basis point adder is subject to the zone of
9 reasonableness as stated in *Niagara Mohawk* and in *ISO New England, Inc.*, 106 FERC ¶
10 61,280 at P 246 (2004). Application of a 50 basis point adder for NYPA's continued
11 participation in the NYISO is appropriate here, because it results in an ROE of 9.15%,
12 which is well below the upper end of the zone of reasonableness of 10.29%.

13 **Capital Structure**

14 **Q. What capital structure should be used to set NYPA's transmission revenue**
15 **requirement?**

16 A. Generally, the capital structure of an entity with a formula rate varies from year to year as
17 its long-term capitalization ratio changes due to, for example, the issuance of additional
18 debt. NYPA's 2014 capital structure and its components are shown in the Formula Rate
19 attached as Exhibit No. PA-102 and sponsored by NYPA witness Mr. Scott Tetenman as
20 well as repeated in my Exhibit No. PA-303, p. 5. As shown, the formula contains a stated
21 cost of equity of 9.15%, a cost of debt of 4.72% based on 2014 data, and an actual 2014

long-term debt-to-equity ratio of 23.6/76.4.³ This would produce an overall ROR of 8.10%. However, the 2014 debt ratio of 23.6% is anomalously low, even in view of NYPA's conservative use of debt. NYPA does not ask to have its transmission revenue requirement determined using a debt-to-equity ratio of 23.6/76.4. Instead, NYPA proposes a capital structure that better reflects its long-term capitalization goals, and better represents the debt-to-equity ratio that NYPA will achieve during the transmission life extension and modernization program period which necessitates this Formula Rate filing. NYPA will target a more leveraged capital structure as its need to access capital increases in the coming years, and therefore proposes to cap the equity component of its capital structure produced by the Formula Rate at 60% equity. *See, e.g., Transource Wisconsin, LLC*, 149 FERC ¶ 61,180 at P 34 (2014) ("We note that the Commission traditionally does not require applicants to cap the capital structures used for ratemaking at a particular numerical value. Here, however, Transource Wisconsin has voluntarily proposed to cap the equity component of its capital structure, and we accept this voluntary cap.").

Q. Please clarify the equity ratio that is proposed for the ongoing Formula Rate updates.

A. NYPA proposes to use its actual capital structure produced by the data inputs to the Formula Rate each year, subject to a voluntary cap of 60% equity. While the 60% equity ratio is below NYPA's actual equity ratio now, it is reasonably close to NYPA's long-

³ This debt-to-equity ratio is determined using the average of the beginning of year and end of year capital account balances.

term target ratio of 65%, which maintains its bond rating. NYPA's equity will decline from its current 76.4% level as it pursues its current capital spending program. If for some unforeseen reason NYPA's equity ratio falls below 60%, then the lower actual equity ratio produced by the Formula Rate will be used. This proposal assures that rates are not set based on an equity ratio that is higher than anticipated, and assures that ratepayers are paying a return only on actual equity. Using 2014 data, capping the equity component of the capital structure at 60% produces an overall ROR is 7.38% as seen in Exhibit No. PA-303, p. 5, and also shown in Exhibit No. PA-102 of Mr. Scott Tetenman's testimony.

Q. Would it be appropriate to cap the equity component of NYPA's capital structure at a number less than 60%?

A. No. NYPA is already proposing that rates be set using a lower equity ratio than its long-term goal of 65%, a goal recognized by the ratings agencies. This 60% equity limit is being proposed on a voluntary basis in order to minimize the rate increases under the Formula Rate during this period of capital spending. NYPA's conservative use of debt contributes significantly to its strong credit profile, "AA"/"Aa1" credit rating, and low cost of debt, and is consistent with the expectations of NYPA's debt investors. The latest Moody's credit report (Exhibit No. PA-305, p. 3) on NYPA states the following:

The financial flexibility provided by NYPA's strong balance sheet and debt service coverage ratios are a key factor in its Aa1 rating. Historically, NYPA pursued an aggressive debt-management strategy targeted at eliminating generation-related debt with the intent of lowering its fixed costs and thus its customers' power rates. As a result, it reduced outstanding revenue bond debt (including commercial paper notes) to about \$1.7 billion in 2014

1 from \$3.5 billion in 1994. The strategy has positioned NYPA well
2 to implement its current large capital program, and as a result, total
3 funded debt is expected to remain fairly constant [at] about \$1.7
4 billion. This is consistent with NYPA's goal of maintaining a ratio of
5 35% debt-to-capital (excluding capital leases).

6 Capping NYPA's equity capitalization at less than 60% fails to recognize that NYPA's
7 effective overall ROR is already much lower than an average IOU's effective ROR when
8 taxes are considered. Capping the equity ratio at less than 60% is also incongruous with
9 the use of NYPA's actual cost of debt of 4.72%, which is a result of its high bond rating,
10 and in itself attributable to NYPA's low-leverage capital structure. In the event of a
11 proposal to further cap NYPA's equity ratio below 60%, FERC and other parties, as well
12 as NYPA, would need to re-examine the proxy group used to determine the ROE and
13 include lower-rated entities in the proxy group for purposes of the DCF analysis.

14 **Q. Does NYPA require a greater degree of equity capitalization to achieve the same**
15 **credit rating as a comparable IOU?**

16 **A.** Yes. A primary consideration of credit rating agencies in evaluating the credit rating of a
17 debt issuer is the safety margin over and above interest costs provided by earnings and
18 income taxes, and sometimes, other cash flow measures, such as depreciation and
19 amortization. An IOU with an identical rate base and rate of return would have a higher
20 safety margin than NYPA because of the income tax allowance included in rates. By
21 increasing the higher-cost equity component of NYPA's capital structure relative to debt,
22 NYPA can achieve the same safety margin as an IOU without any added cost to
23 customers, because NYPA does not recover an income tax allowance. Because typical
24 public utilities earn a grossed up cost of equity, this makes an ROE of 9.15% effectively

1 cost about 14.00% at the Federal corporate income rate of 35%. However, the same
2 9.15% ROE for NYPA is simply 9.15%. Thus, comparative data suggests that NYPA's
3 "AA"/"Aa1" bond rating, which is supported by its conservative use of debt and high rate
4 of equity capitalization, does not come at an increased cost to ratepayers compared to an
5 IOU with a lower credit rating and lesser degree of equity capitalization.

6 **Q. Are you, in essence, recommending that NYPA's overall allowed rate of return**
7 **should be as high as the pre-tax rate of return for an IOU?**

8 A. No. NYPA's 2014 overall ROR of 7.38% with the equity ratio capped at 60% is about
9 25% lower than the 10.19% effective overall ROR for a representative IOU's pre-tax
10 return. As shown in Exhibit No. PA-303, p. 5, the capital structure example labeled,
11 "*Capital Structure of Electric Utilities From Latest Regulatory Research Report/2015*
12 *@Pre-Tax Return*" shows how income taxes increase the effective overall rate of return
13 to 10.19% that is included in the revenue requirement of an IOU with a more typical
14 capital structure. The 60% equity ratio target is not intended as a surrogate to recover an
15 income tax allowance. It is simply intended to represent NYPA's low-end estimate of its
16 actual future equity ratio during this significant capital spending program and is actually
17 a bit lower than the equity ratio debt-rating firms and debt investors would expect to see
18 for NYPA over the foreseeable future. The use of NYPA's actual capital structure,
19 subject to the proposed 60% cap, is also consistent with FERC's practice of favoring
20 actual capital structures, as well as FERC precedent allowing applicants to voluntarily
21 cap their equity ratios.

22 **Q. Please explain in more detail what Exhibit No. PA-303, p. 5 shows.**

1 A. The capital structure labeled “*Actual 2014 Capital Structure*” shows NYPA’s cost
2 components for debt and equity, based upon its 2014 actual capitalization. The resulting
3 overall ROR would be 8.10% based upon NYPA’s actual capital structure. The capital
4 structure labeled “*Requested Capital Structure*” shows the same cost components applied
5 to the voluntarily capped 40/60 debt-to-equity ratio, and the resulting 7.38% overall
6 ROR. The capital structure labeled “*Capital Structure Of Electric Utilities From Latest*
7 *Regulatory Research Report/2015 Decisions/Exhibit No. PA-304*” shows the average
8 weighted cost of capital for investor-owned utilities involved in major retail electric rate
9 cases decided during the first three quarters of 2015. The average overall ROR of 7.47%
10 represents a fair approximation, based upon real world data, of what NYPA’s overall
11 ROR would be if it were capitalized in a manner similar to a typical investor-owned
12 utility, even ignoring its comparative investor risk disadvantage to investors of not having
13 an income tax allowance. As can be seen, the average after-tax electric utility ROR of
14 7.47% is similar to NYPA’s requested return of 7.38%, and confirms, again, that NYPA’s
15 “AA”/“Aa1” bond rating and voluntary 60% cap on its equity ratio do not come at a cost
16 penalty to ratepayers. Finally, the last capital structure labeled “*Capital Structure of*
17 *Electric Utilities From Latest Regulatory Research Report/2015 @Pre-Tax Return*”
18 shows the total cost of capital, grossed up for taxes, of the utilities involved in major
19 electric rate cases decided during the first three quarters of 2015. As can be seen, the
20 average overall ROR, assuming a 35% corporate tax rate, is 10.19%, demonstrating that
21 when taxes are accounted for, NYPA’s overall ROR is about 25% lower than an average
22 IOU.

1 **Q. What additional reference materials have you included in your exhibits?**

2 A. Exhibit Nos. PA-305 and 306 include copies of the reports from both Moody's and S&P
3 for reference. I have included copies of both the Moody's and S&P reports because I
4 referred to the ratings and quoted from the Moody's report. The Value Line reports I
5 relied upon are shown in Exhibit Nos. PA-307 and 308. Exhibit Nos. PA-309 and 310
6 show the stock price data that I used in my yield calculations for my two-step DCF
7 analysis.

8 **Q. Does this conclude your testimony?**

9 A. Yes, it does.

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

New York Power Authority

)

Docket No. ER16-__-000

AFFIDAVIT OF RICHARD L. ANSALDO

State of New York *FL.*)

County of Albany *Lee*)

I, Richard L. Ansaldo, being duly sworn, depose and say that the statements contained in the Prepared Direct Testimony of Richard L. Ansaldo served on behalf of the New York Power Authority in these proceedings are true and correct to the best of my knowledge, information and belief, and I hereby adopt said testimony as if given by me in formal hearing, under oath.

Richard L. Ansaldo

Richard L. Ansaldo

SUBSCRIBED AND SWORN to before me
This *25* day of January, 2016

Theresa E. Hroncich



Richard L. Ansaldo
P.O. Box 2542
Albany, NY 12220
518-527-8298
rickansaldo@yahoo.com
Resume

Areas of Expertise and Specialization

32 years of experience from September 1976 to October 2008 in regulating Electric, Gas, Telephone and Water utilities in increasingly responsible roles at the New York State Department of Public Service. For 26 of those years I was a Section Chief in the Office of Accounting and Finance. In that role I supervised financial analysts and accountants in the agency's role and jurisdiction over rates and service. Specific areas of expertise include financial analysis, revenue requirements, rate of return, economic studies, financing techniques, capital structure, financial integrity, regulatory policy, management, negotiations, and administrative rules and regulations.

Since 2008 I have been self-employed as an independent consultant providing advice and expertise on energy, conservation, utility, policy, and financial issues. My clients have included NRG Energy, Inc., Dynegy, Inc., Cable Telecommunications Association of New York, Municipal Electric Utilities Association of New York, Heritage Hills Water Corporation, and NYPA. I submitted rate of return testimony and exhibits in NYPA's 2012 filing before FERC to update its transmission revenue requirement in Docket No. ER12-2317-000, as well as in NYPA's 2015 transmission filing in Docket No. ER15-2102-000.

Relevant Experience

- Chief, Office of Accounting and Finance for the New York State Department of Public Service, 1992 – 2008. Senior policy and technical advisor to the Commission on electric, gas, telephone, and water matters, and shared administrative responsibilities for Office of Accounting and Finance. Responsibilities included regulatory and competitive policy development and implementation, overseeing rate proceedings and ratemaking, review corporate financial planning, reviewing and advising on utility financial plans, reviewing mergers and acquisitions and intervention in FERC gas proceedings. Developed a training program for Staff development in rate cases.
 - Chief of Utility Financing in the Office of Accounting and Finance for the New York State Department of Public Service, 1982 – 1992. Senior policy and technical advisor to the Commission on electric, gas, telephone, and water matters, focusing on financial issues and shared administrative responsibilities for Office of Accounting and Finance.
-

- National Association of Regulatory Utility Commissioners (NARUC), 1984 – 1990. Directed the expansion of Finance Section and served as Chairman to NARUC Subcommittee on Finance from 1984 to 1986 and Co-chair of the merged Subcommittee on Finance and Economics from 1986 – 1990.

- Progressed from Senior Accountant to Principal Financial Analyst in the Office of Accounting and Finance for the New York State Department of Public Service from 1976 to 1982. In that role testified in numerous rate proceedings involving electric, gas, telephone and water utilities and analyzed numerous financing petitions.

- From 1972 – 1976 was at the General Electric Company in the Financial Management Training Program and then served in account and auditing positions at the New York State Department of Labor.

Specific Expertise Developed At The New York Commission

- Testified in over 45 proceeding involving issues of rates, emergency rates, plant phase-ins, steam system abandonment, coal conversion, long-term rate plans and cash management.
- Testified before the New York Commission, FERC, and The Connecticut Department of Utility Control.
- Developed and reviewed revenue requirements for utility rate cases.
- Developed discount rates to perform strategic analysis on plans to continue nuclear plant completion and to evaluate conservation programs for demand side management.
- Assisted Administrative Law Judges in developing recommendations in cases to be presented to the Commission.
- Made presentations to the Commission on a multitude of issues involving rates, finances and policy and advised Commissioners on pending decisions.
- Acquired special expertise in negotiations through experience and academic training program by Harvard University professors based upon the book “Getting to Yes.”
- Developed “milestone” criteria for honoring power purchase contracts during the 1980s and 1990s.
- Developed protections against holding company abuses which have become policy at the New York Department of Public Service.
- Developed techniques for removing the impact of non-earning assets from Holdco financial statements so that utility rates would not be increased by Holdco activities.
- Advised the Receiver for a utility in bankruptcy, leading to the successful continuation of utility service after a successful auction of the troubled utility.

Utilities Covered

Consolidated Edison Company of New York, Inc.
Orange and Rockland Utilities, Inc.
Central Hudson Gas & Electric Corporation
Niagara Mohawk Power Corporation (now National Grid)
New York State Electric & Gas Corporation

Rochester Gas and Electric Corporation

National Fuel Gas

Long Island Lighting Company (now Long Island Power Authority, aka LIPA)

Keyspan Gas Properties (now National Grid)

Corning Natural Gas

All Major Water Utilities

All Telephone Companies including NYNEX (now Verizon)

Education

BS Degree in Accounting and Business Administration, and Graduate Certificate in Regulatory Economics, State University of New York at Albany

New York Power Authority, FERC Proxy Group Method/Notes

1. FERC's new ROE methodology for electric utilities was set forth in Docket No. EL11-66-001, Opinion No. 531, issued on June 19, 2014. FERC's opinion stated at P 13, "For the reasons discussed below, we find that the ROE in this proceeding, as well as in future public utility cases, should be based on the same DCF methodology the Commission has used in natural gas pipeline and oil pipeline cases for many years—the two-step, constant growth DCF methodology, or two-step DCF methodology."
2. Proxy group selection began by including the highest-rated electric utilities which were the closest to NYPA's AA/Aa1 bond rating. The credit rating screen was affirmed by FERC at PP 106-07 of Opinion No. 531. The selection of the proxy group referenced both S&P and Moody's bond ratings. Due to NYPA's AA/Aa1 rating, to attain a reasonable sized group, the proxy group includes electric utilities with a rating of at least A3 from Moody's or at least an A- from S&P. In accordance with Opinion No. 531 at P 114 and the FERC precedent cited therein, companies involved in merger and acquisition activity were eliminated.
3. To arrive at the DCF growth rate, the IBES 5-year future analyst estimate was weighted $2/3^{\text{rds}}$ and added to the GDP deflator (weighted $1/3^{\text{rd}}$), as discussed in Opinion No. 531 at PP 39, 88-90.
4. The dividend yield was calculated in accordance with Opinion No. 531 at P 77, using a three-step process: "(1) averaging the high and low stock prices as reported by the New York Stock Exchange or NASDAQ for each of the six months in the study period; (2) dividing the company's indicated annual dividend for each of those months by its average stock price for each month (resulting in a monthly dividend yield for each month of the study period); and (3) averaging those monthly dividend yields."
5. FERC's "adjusted dividend yield" was then calculated by increasing the dividend yield as calculated in 4. above by a factor of 1 plus $1/2$ the weighted DCF growth rate as in past FERC practice and referenced at P 15 of Opinion No. 531. This conforms the calculation to estimate the investors' expectations of the average dividend over the next 12 months, to be consistent with DCF theory.
6. A low-end outlier, Edison International, was excluded from the group because the indicated ROE of 3.98% was unreasonably low in accordance with FERC precedent and guidance in Opinion No. 531 at PP 122-23. The Edison International DCF fails to pass any notion of central tendency or norm of the rest of the proxy group as is indicated at P 122 of Opinion No. 531 where it is indicated that the distribution of the proxy group is used to inform its decision on which companies are outliers. Edison International's indicated ROE of 3.98% is also below the cost of new debt plus 100 basis points (See Exhibit No. PA-303, p. 7), also indicating that it is a low end outlier.
7. The dividend yield and growth rate statistics were then added together to arrive as the total DCF cost of equity estimate. The median return of the range (8.65%) was determined as consistent with FERC precedent and the best measure of central tendency for the array and the range of numbers in the array allows for FERC's 50 basis point incentive for NYPA's participation in the NYISO.

8. Market conditions are now similar to those that existed during the period that Opinion No. 531 was litigated as shown by the yield on Treasury Bonds (see PA-303, page 6). Also, as shown in PA-303, page 8, DCF returns are also similar to those that existed during the litigation in Opinion No. 531. Opinion 531 suggests the ROE can therefore be set at the average of a measure of central tendency and the highpoint. However, NYPA is not requesting the upward adjustment here. Therefore NYPA proposes that its base ROE be set at only 8.65%, and that its return after the 50 bp incentive should be 9.15%.

Exhibit No. PA-303 Contents:

- Pages 1 and 2: Notes on FERC Opinion No. 531 method and application to this case
- Page 3: 19 Company Proxy Group DCF
- Page 4: 19 Company Bond Rating Screen
- Page 5: Comparison of Overall Rates of Returns with different equity ratios
- Page 6: Treasury Yield Rates current vs. Opinion No. 531 time period
- Page 7: Corporate and Utility Bond Yields
- Page 8: Comparison of DCF Returns for 16 Companies in NYPA Proxy Group to same companies that were in Opinion No. 531 FERC analysis
- Page 9 NYPA Historical Equity Ratios
- Page 10: GDP Growth Rate Estimate
- Page 11: IBES Growth Rates

Exhibit Nos. PA-304 to PA-310 Contents:

- PA-304: Regulatory Focus, Major Rate Case Decisions
- PA-305: Moody's Bond Rating Report
- PA-306 Standard and Poor's Bond Rating Report
- PA-307 Value Line Reports on 19 Company Proxy Group
- PA-308 Value Line Reports on Companies eliminated from Proxy Group
- PA-309 Stock Price Data used in Yield calculation/Date Order
- PA-310 Yield Calculation Based Upon Low-High Six Month Data/ Reordered

19 Company Proxy Group DCF Summary

		IBES 5		WTD	Dividend			
	Proxy Electric	year		Growth	Multiplier	6/1/2015 to	Adjusted	Total DCF
	Company	Growth %	GDP %	% 2/3	1 plus 1/2	11/30/2015	Yield %	Return %
		11/30/2015	Deflator	IBES, 1/3	wtd	Avg Yield %		
				GDP	Growth			
1	Allete Inc	5.50	4.38	5.13	1.0256	4.13	4.24	9.36
2	Alliant Energy	5.40	4.38	5.06	1.0253	3.75	3.84	8.90
3	Centerpoint Enrg..	0.47	4.38	1.77	1.0089	5.42	5.47	7.24
4	Con Edison	2.79	4.38	3.32	1.0166	4.15	4.22	7.54
5	DTE Energy	4.94	4.38	4.75	1.0238	3.71	3.80	8.55
6	Dominion Res.	5.41	4.38	5.07	1.0253	3.74	3.83	8.90
7	<i>Edison Intern'l*</i>	-0.44	4.38	1.17	1.0058	2.80	2.82	3.98
8	Eversource	6.57	4.38	5.84	1.0292	3.49	3.59	9.43
9	IDACorp Inc	4.00	4.38	4.13	1.0206	3.19	3.26	7.38
10	Madison G&E	4.00	4.38	4.13	1.0206	2.96	3.02	7.15
11	Northwestern	6.81	4.38	6.00	1.0300	3.67	3.78	9.78
12	OGE Energy	2.17	4.38	2.91	1.0145	3.71	3.76	6.67
13	Otter Tail	6.00	4.38	5.46	1.0273	4.70	4.83	10.29
14	PG&E Corp	5.91	4.38	5.40	1.0270	3.54	3.64	9.04
15	Portland General	3.92	4.38	4.07	1.0204	3.39	3.46	7.53
16	Pinnacle West	5.15	4.38	4.89	1.0245	3.92	4.02	8.91
17	Pub Ser Enterprise	1.54	4.38	2.49	1.0124	3.84	3.89	6.37
18	Vectren Corp.	5.00	4.38	4.79	1.0240	3.86	3.95	8.75
19	Xcel Energy	4.68	4.38	4.58	1.0229	3.74	3.83	8.41

Median**8.65****Range****6.37 to 10.29****ROE +50 bp****9.15****Edison Intern'l = Low-end Outlier*

19 Company Proxy Group Screen. Value Line, and Bond Ratings

Proxy Electric Company	11/30/2015 S&P Bond Rating	11/30/2015 Moody's Bond Rating	Stock Sym.	Value Line 2015 ROE %	Value Line 2016 ROE %	Value Line 2018-20 ROE %
Allete Inc	BBB+	A3	ALE	8.50	8.00	9.00
Alliant Energy	A-	A3	LNT	11.50	11.50	11.50
Centerpoint Enrg.	A-	Baa1	CNP	10.00	10.00	11.50
Con Edison	A-	A3	ED	9.00	9.00	9.00
DTE Energy	BBB+	A3	DTE	9.00	9.00	10.00
Dominion Res,	A-	Baa2	D	16.50	15.50	17.50
Edison Intern'l	BBB+	A3	EIX	12.50	11.50	11.50
Eversource Energy	A	Baa1	ES	8.50	9.50	9.50
IDA Corp Inc.	BBB	A3	IDA	9.00	9.00	8.50
Madison G&E	AA-	A1	MGE	10.50	11.00	13.00
Northwestern	BBB	A3	NWE	9.00	9.50	10.00
OGE Energy	A-	A3	OGE	10.50	11.00	11.50
Otter Tail	BBB	A3	OTTR	10.00	11.00	12.50
PG&E Corp	BBB	A3	PCG	5.00	9.00	10.50
Pinnacle West	A-	A3	PNW	9.50	9.50	10.00
Portland General	BBB	A3	POR	8.00	9.00	9.50
Pub Ser Enterprise	BBB+	A2	PEG	12.50	11.00	11.00
Vectren Corp.	A-	A2	VVC	12.00	13.00	15.00
Xcel Energy	A-	A3	XEL	10.00	10.00	10.00
Mean				<u>10.08</u>	<u>10.37</u>	<u>11.11</u>

Comparison Of Overall Rate Of Returns With Different Equity Ratios

Actual 2014 Capital Structure

2014 Actual Capital Structure	Percent	Cost %	Weighted Cost
Debt	23.60	4.72	1.11
Equity	<u>76.40</u>	9.15	<u>6.99</u>
Overall ROR	<u>100.00</u>		<u>8.10</u>

Requested Capital Structure

Long Term Capital Structure	Percent	Cost %	Weighted Cost
Debt	40.00	4.72	1.89
Equity	<u>60.00</u>	9.15	<u>5.49</u>
Overall ROR	<u>100.00</u>		<u>7.38</u>

Capital Structure Of Electric Utilities From Latest Regulatory Research Report/2015 Decisions/Exhibit No. PA-304

Capital Structure	Percent	Cost %	Weighted Cost
Debt	49.59	4.89	2.42
Equity	<u>50.41</u>	10.01	<u>5.05</u>
Overall ROR	<u>100</u>		<u>7.47</u>

Capital Structure Of Electric Utilities From Latest Regulatory Research Report/2015 @Pre- tax Return

Capital Structure	Percent	Cost % with Tax Effect	Weighted Cost
Debt	49.59	4.89	2.42
Equity	<u>50.41</u>	15.40	<u>7.76</u>
Overall ROR	<u>100</u>		<u>10.19</u>

15.40% pre-tax= 10.01%/ .65 tax rate

Treasury Yields During Opinion No. 531 Issuance vs. Current Treasury Yields
Source: Treasury.gov

Date	<u>10 Yr</u>	<u>20 Yr</u>	<u>30 Yr</u>	Date	<u>10 Yr</u>	<u>20 Yr</u>	<u>30 Yr</u>
10/31/2012	1.72	2.46	2.85	6/30/2015	2.35	2.83	3.11
11/30/2012	1.62	2.37	2.81	7/31/2015	2.20	2.61	2.92
12/31/2012	1.78	2.54	2.95	8/31/2015	2.21	2.64	2.95
1/31/2013	2.02	2.79	3.17	9/30/2015	2.06	2.51	2.87
2/28/2013	1.89	2.71	3.10	10/30/2015	2.16	2.57	2.93
3/28/2013	1.87	2.71	3.10	11/30/2015	2.21	2.63	2.98
Avg. For Opinion No. 531 Time Period	1.82	2.60	3.00	Avg. For NYPA Formula Rate Filing	2.20	2.63	2.96

Corporate and Utility Bond Yields

1. Corporate Bond Yields For 6 Months Ending 11/30/2016

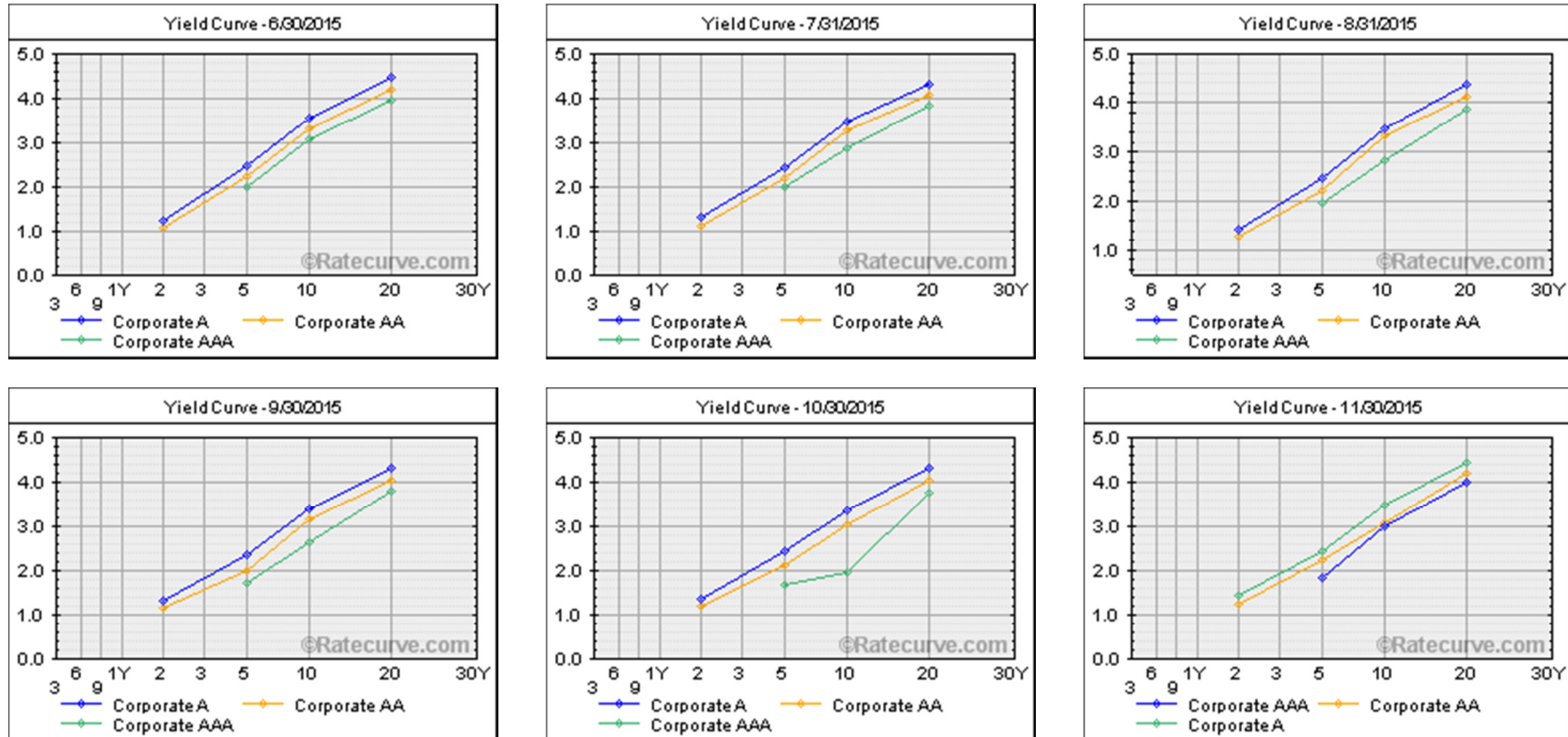


Chart source: bondonline.com

2. Average on Moody's Public Utility Bonds 6 months to Oct 2015 = 4.58% (Docket No. EL15-45-000, Exh. S-2, Sch. No.10, page 10 of 14)

3. High Quality Corporate Bond Yields treasury.gov

2015	June	July	August	September	October	November
10 Year	3.72%	3.75%	3.68%	3.72%	3.62%	3.74%
30 year	4.70%	4.67%	4.56%	4.63%	4.58%	4.68%

Comparison of DCF Returns For 16 Companies in NYPA Proxy Group That Were In Opinion No. 531

Proxy Electric Company		6 months to 11/30/2015 Total DCF Return %	6 months to 3/30/2013 Opinion No. 531 DCF%*
1	Allete Inc	9.36	9.95
2	Alliant Energy	8.90	9.63
3	Centerpoint Enrg..	7.24	8.89
4	Con Edison	7.54	7.12
5	DTE Energy	8.55	8.46
6	Dominion Res.	8.90	10.67
7	Eversource (Northeast)	9.43	10.62
8	IDACorp Inc	7.38	7.59
9	Northwestern	9.78	9.08
10	OGE Energy	6.67	7.43
11	Otter Tail	10.29	9.51
12	PG&E Corp	9.04	7.94
13	Portland General	7.53	9.14
14	Pinnacle West	8.91	10.56
15	Vectren Corp.	8.75	9.55
16	Xcel Energy	8.41	8.87
Median		<u>8.82</u>	<u>9.11</u>

Returns for 3 companies (Madison G&E, Edison International, and Public Service Enterprise) in the 19 company proxy group were not data points in Opinion No. 531, and thus only 16 companies are shown in this exhibit.

Exhibit No. PA-303, Page 9 of 11

New York Power Authority Historical Actual Equity Ratios

	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>
Net Position 1/1	3,719	3,470	3,295	3,001
Net Position 12/31	<u>3,991</u>	<u>3,719</u>	<u>3,470</u>	3,295
Average Net Position	<u>3,855</u>	<u>3,595</u>	<u>3,383</u>	<u>3,148</u>
Long Term Debt 1/1	1,241	1,335	1,434	1,618
Long Term Debt 12/31	<u>1,145</u>	<u>1,241</u>	<u>1,335</u>	<u>1,434</u>
Avg. Long Term Debt	<u>1,193</u>	<u>1,288</u>	<u>1,385</u>	<u>1,526</u>
Total Capitalization	<u>5,048</u>	<u>4,883</u>	<u>4,767</u>	<u>4,674</u>
Equity Ratio % (Avg.Net Position/Total Capitalization)	<u>76.4</u>	<u>73.6</u>	<u>71.0</u>	<u>67.4</u>

4 year Avg.= 72%

Source: NYPA Annual Reports

Exhibit No. PA-303, Page 10 of 11

Long-Term U.S. Gross Domestic (GDP) Growth Estimates For The 3rd Quarter of 2015

Source	Year Beginning	Nominal GDP (\$Billion)	Year Ending	Nominal GDP (\$Billion)	Annual GDP Growth (%)
IHS (1)	2020	*	2045	*	4.46%
EIA (2)	2020	22,760	2040	51,732	4.19%
SSA (3)	2020	23,687	2070	211,683	4.48%
					<u>4.38%</u>

* IHS Forecast Not Publicly Available. 4.46% is taken from Exh. No. S-2 of FERC Staff testimony of Robert J. Keyton filed on 11/23/2015 in Docket No. EL15-45-000. The overall GDP growth of 4.38% in that testimony is consistent with this testimony.

(2) Based on Data from EIA 2015 Annual Energy Outlook.

<http://www.eia.gov/forecasts/aeo/pdf/tbla20.pdf>

Year	EIA Chain Type Price Index	Real GDP
2020	1.211	18801
2040	1.730	29898

(3) Based on Social Security Administration 2015
OASDI Trustees Report

https://www.socialsecurity.gov/oact/tr/2015/VI_G2_OASDHI_GDP.html

GDP 2020	23687
GDP 2070	211683

19 Company IBES Growth Rates Yahoo Finance 11/30/2015
(Next 5 years Per Annum) FERC Method

Growth Est	ALE	Industry	Sector	S&P 500
Next 5 Years (per annum)	5.50%	6.68%	6.25%	5.58%
Growth Est	LNT	CNP	ED	DTE
Next 5 Years (per annum)	5.40%	.47%	2.79%	4.94%
Growth Est	D	EIX	ES	IDA
Next 5 Years (per annum)	5.41%	-.44%	6.57%	4.00%
Growth Est	MGE	NWE	OGE	OTTR
Next 5 Years (per annum)	4.00%	6.81%	2.17%	6.00%
Growth Est	PCG	PNW	POR	PEG
Next 5 Years (per annum)	5.91%	5.15%	3.92%	1.54%
Growth Est	VVC	XEL		
Next 5 Years (per annum)	5.00%	4.68%		

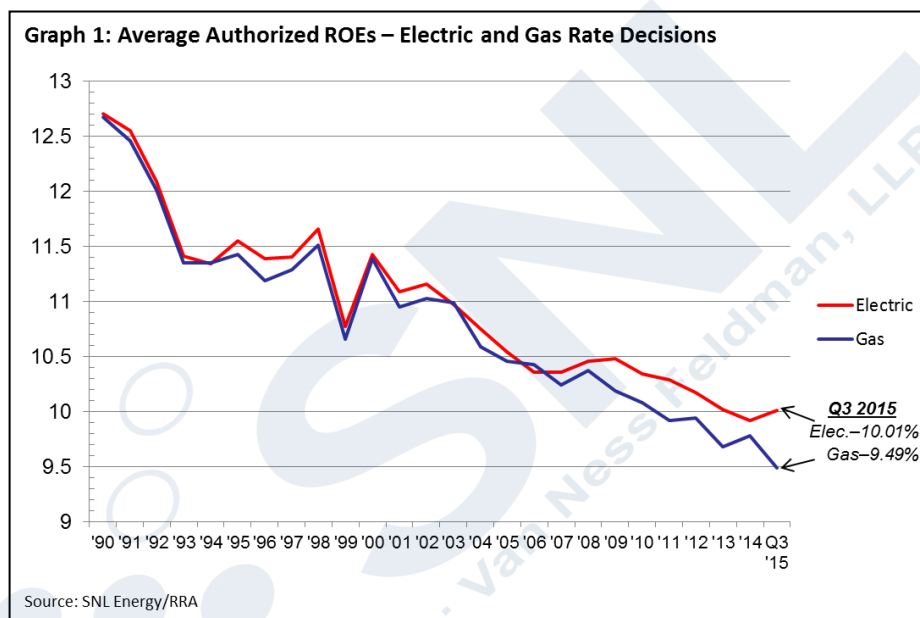


REGULATORY FOCUS

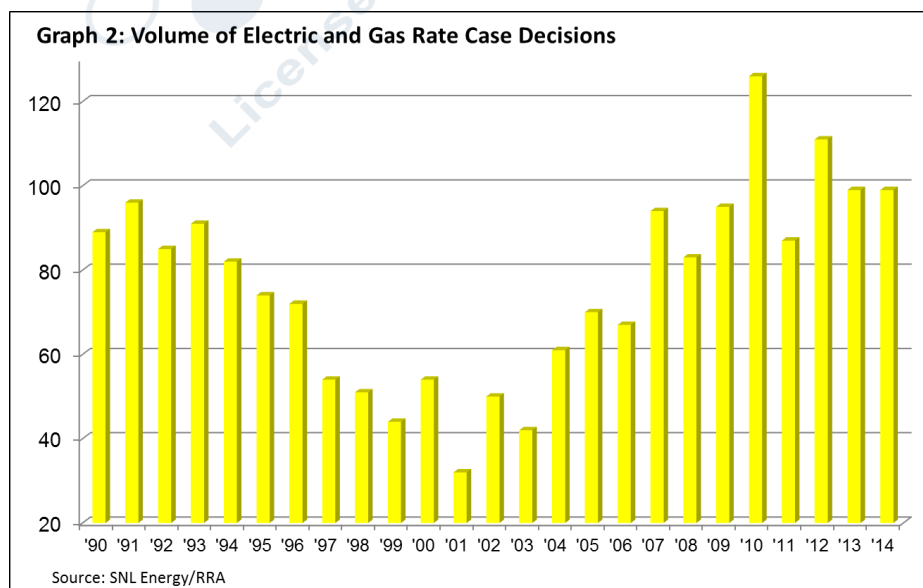
October 13, 2015

MAJOR RATE CASE DECISIONS--January-September 2015

The average return on equity (ROE) authorized electric utilities was 10.01% in the first three quarters of 2015, compared to 9.91% in calendar-2014. There were 18 electric ROE determinations for the first nine months of 2015, versus 38 in all of 2014. We note that the data includes several surcharge/rider generation cases in Virginia that incorporate plant-specific ROE premiums. Virginia statutes authorize the State Corporation Commission to approve ROE premiums of up to 200 basis points for certain generation projects (see the [Virginia Commission Profile](#)). Excluding these Virginia surcharge/rider generation cases from the data, the average authorized electric ROE was 9.55% in the first three quarters of 2015 versus 9.76% in 2014. The average ROE authorized gas utilities was 9.49% for the first nine months in 2015 compared to 9.78% in calendar-2014. There were seven gas cases that included an ROE determination in the first three quarters of 2015, versus 26 in 2014. The 2014 averages do not include a Feb. 20, 2014 New York Public Service Commission steam rate decision for Consolidated Edison Co. of New York that adopted a 9.3% ROE.



As shown in Graph 2 below, after reaching a low in the early-2000s, the number of rate case decisions for energy companies generally increased for the next several years, peaking in 2010 at more than 125 cases.



Since 2010, the number of cases has moderated somewhat but has approximated 100 in three of the last four calendar years. There were 99 electric and gas rate cases resolved in both 2014 and 2013, 111 in 2012, and 87 in 2011. There are currently roughly 30 electric and gas rate cases that are expected to be decided in the fourth quarter of 2015, indicating a more modest level of activity in 2015, but this level remains robust compared to the late-1990s/early-2000s. Increased costs for environmental compliance, generation and delivery infrastructure upgrades and expansion, renewable generation mandates, and employee benefits argue for the continuation of an active rate case agenda over the next few years.

We note that this report utilizes the simple mean for the return averages. In addition, the average equity returns indicated in this report reflect the cases decided in the specified time periods and are not necessarily representative of the returns actually earned by utilities industry wide.

As a result of electric industry restructuring, certain states unbundled electric rates and implemented retail competition for generation. Commissions in those states now have jurisdiction only over the revenue requirement and return parameters for delivery operations (which we footnote in our chronology beginning on page 5), thus complicating historical data comparability. We note that since 2008, interest rates have declined significantly and average authorized ROEs have declined modestly. We also note the increased utilization of limited issue rider proceedings that allow utilities to recover certain costs outside of a general rate case and that typically incorporate previously-determined return parameters.

The table on page 3 shows the average ROE authorized in major electric and gas rate decisions annually since 1990, and by quarter since 2010, followed by the number of observations in each period. The tables on page 4 indicate the composite electric and gas industry data for all major cases summarized annually since 2001 and by quarter for the past seven quarters. The individual electric and gas cases decided in the first three quarters of 2015 are listed on pages 5-8, with the decision date shown first, followed by the company name, the abbreviation for the state issuing the decision, the authorized rate of return (ROR), ROE, and percentage of common equity in the adopted capital structure. Next we indicate the month and year in which the adopted test year ended, whether the commission utilized an average or a year-end rate base, and the amount of the permanent rate change authorized. The dollar amounts represent the permanent rate change ordered at the time decisions were rendered. Fuel adjustment clause rate changes are not reflected in this study.

Please note: Historical data provided in this report may not match data provided on RRA's website due to certain differences in presentation.

Dennis Spurduto

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Average Equity Returns Authorized January 1990 - September 2015

Year	Period	Electric Utilities		Gas Utilities	
		ROE %	(# Cases)	ROE %	(# Cases)
1990	Full Year	12.70	(44)	12.67	(31)
1991	Full Year	12.55	(45)	12.46	(35)
1992	Full Year	12.09	(48)	12.01	(29)
1993	Full Year	11.41	(32)	11.35	(45)
1994	Full Year	11.34	(31)	11.35	(28)
1995	Full Year	11.55	(33)	11.43	(16)
1996	Full Year	11.39	(22)	11.19	(20)
1997	Full Year	11.40	(11)	11.29	(13)
1998	Full Year	11.66	(10)	11.51	(10)
1999	Full Year	10.77	(20)	10.66	(9)
2000	Full Year	11.43	(12)	11.39	(12)
2001	Full Year	11.09	(18)	10.95	(7)
2002	Full Year	11.16	(22)	11.03	(21)
2003	Full Year	10.97	(22)	10.99	(25)
2004	Full Year	10.75	(19)	10.59	(20)
2005	Full Year	10.54	(29)	10.46	(26)
2006	Full Year	10.36	(26)	10.43	(16)
2007	Full Year	10.36	(39)	10.24	(37)
2008	Full Year	10.46	(37)	10.37	(30)
2009	Full Year	10.48	(39)	10.19	(29)
2010	1st Quarter	10.66	(17)	10.24	(9)
	2nd Quarter	10.08	(14)	9.99	(11)
	3rd Quarter	10.26	(11)	9.93	(4)
	4th Quarter	10.30	(17)	10.09	(12)
	Full Year	10.34	(59)	10.08	(37)
2011	1st Quarter	10.32	(13)	10.10	(5)
	2nd Quarter	10.12	(10)	9.88	(5)
	3rd Quarter	10.36	(8)	9.65	(2)
	4th Quarter	10.34	(11)	9.88	(4)
	Full Year	10.29	(42)	9.92	(16)
2012	1st Quarter	10.84	(12)	9.63	(5)
	2nd Quarter	9.92	(13)	9.83	(8)
	3rd Quarter	9.78	(8)	9.75	(1)
	4th Quarter	10.10	(25)	10.07	(21)
	Full Year	10.17	(58)	9.94	(35)
2013	1st Quarter	10.28	(14)	9.57	(3)
	2nd Quarter	9.84	(7)	9.47	(6)
	3rd Quarter	10.06	(7)	9.60	(1)
	4th Quarter	9.91	(21)	9.83	(11)
	Full Year	10.03	(49)	9.68	(21)
2014	1st Quarter	10.23	(8)	9.54	(6)
	2nd Quarter	9.83	(5)	9.84	(8)
	3rd Quarter	9.87	(12)	9.45	(6)
	4th Quarter	9.78	(13)	10.28	(6)
	Full Year	9.91	(38)	9.78	(26)
2015	1st Quarter	10.37	(9)	9.47	(3)
	2nd Quarter	9.73	(7)	9.43	(3)
	3rd Quarter	9.40	(2)	9.75	(1)
	Year-to-Date	10.01	(18)	9.49	(7)

RRA-REGULATORY FOCUS

-4-

October 13, 2015

Electric Utilities--Summary Table

	Period	ROR % (# Cases)		ROE % (# Cases)		Eq. as %		Amt.	
						Cap. Struc. (# Cases)		\$ Mil. (# Cases)	
2001	Full Year	8.93	(15)	11.09	(18)	47.20	(13)	14.2	(21)
2002	Full Year	8.72	(20)	11.16	(22)	46.27	(19)	-475.4	(24)
2003	Full Year	8.86	(20)	10.97	(22)	49.41	(19)	313.8	(12)
2004	Full Year	8.44	(18)	10.75	(19)	46.84	(17)	1,091.5	(30)
2005	Full Year	8.30	(26)	10.54	(29)	46.73	(27)	1,373.7	(36)
2006	Full Year	8.24	(24)	10.36	(26)	48.67	(23)	1,465.0	(42)
2007	Full Year	8.22	(38)	10.36	(39)	48.01	(37)	1,401.9	(46)
2008	Full Year	8.25	(35)	10.46	(37)	48.41	(33)	2,899.4	(42)
2009	Full Year	8.23	(38)	10.48	(39)	48.61	(37)	4,192.3	(58)
2010	Full Year	7.99	(59)	10.34	(59)	48.45	(54)	5,567.7	(77)
2011	Full Year	8.00	(43)	10.29	(42)	48.26	(42)	2,853.5	(56)
2012	Full Year	7.95	(51)	10.17	(58)	50.55	(52)	3,131.5	(70)
2013	Full Year	7.66	(45)	10.03	(49)	49.25	(43)	3,326.6	(61)
	1st Quarter	7.71	(6)	10.23	(8)	51.08	(8)	251.4	(9)
	2nd Quarter	7.77	(2)	9.83	(5)	49.12	(4)	92.5	(6)
	3rd Quarter	7.55	(11)	9.87	(12)	50.12	(11)	651.5	(16)
	4th Quarter	7.56	(13)	9.78	(13)	50.29	(12)	1,058.4	(20)
2014	Full Year	7.60	(32)	9.91	(38)	50.28	(35)	2,053.8	(51)
	1st Quarter	7.74	(10)	10.37	(9)	51.91	(9)	203.7	(11)
	2nd Quarter	7.04	(9)	9.73	(7)	47.83	(6)	819.4	(16)
	3rd Quarter	7.85	(3)	9.40	(2)	51.08	(3)	379.6	(5)
2015	Year-To-Date	7.47	(22)	10.01	(18)	50.41	(18)	1,402.7	(32)

Gas Utilities--Summary Table

	Period	ROR % (# Cases)		ROE % (# Cases)		Eq. as %		Amt.	
						Cap. Struc. (# Cases)		\$ Mil. (# Cases)	
2001	Full Year	8.51	(6)	10.95	(7)	43.96	(5)	114.0	(11)
2002	Full Year	8.80	(20)	11.03	(21)	48.29	(18)	303.6	(26)
2003	Full Year	8.75	(22)	10.99	(25)	49.93	(22)	260.1	(30)
2004	Full Year	8.34	(21)	10.59	(20)	45.90	(20)	303.5	(31)
2005	Full Year	8.25	(29)	10.46	(26)	48.66	(24)	458.4	(34)
2006	Full Year	8.51	(16)	10.43	(16)	47.43	(16)	444.0	(25)
2007	Full Year	8.12	(32)	10.24	(37)	48.37	(30)	813.4	(48)
2008	Full Year	8.48	(30)	10.37	(30)	50.47	(30)	884.8	(41)
2009	Full Year	8.15	(28)	10.19	(29)	48.72	(28)	475.0	(37)
2010	Full Year	7.95	(38)	10.08	(37)	48.56	(38)	816.7	(49)
2011	Full Year	8.09	(18)	9.92	(16)	52.49	(14)	436.3	(31)
2012	Full Year	7.98	(30)	9.94	(35)	51.13	(32)	263.9	(41)
2013	Full Year	7.39	(20)	9.68	(21)	50.60	(20)	494.9	(38)
	1st Quarter	7.67	(6)	9.54	(6)	51.14	(6)	22.2	(9)
	2nd Quarter	7.74	(7)	9.84	(8)	52.12	(8)	62.2	(12)
	3rd Quarter	7.24	(7)	9.45	(6)	48.68	(7)	329.1	(11)
	4th Quarter	7.97	(7)	10.28	(6)	52.35	(7)	115.5	(16)
2014	Full Year	7.65	(27)	9.78	(26)	51.11	(28)	529.0	(48)
	1st Quarter	6.41	(2)	9.47	(3)	50.41	(2)	168.7	(9)
	2nd Quarter	7.29	(3)	9.43	(3)	50.71	(3)	34.9	(8)
	3rd Quarter	7.35	(1)	9.75	(1)	42.01	(1)	95.5	(7)
2015	Year-To-Date	7.01	(6)	9.49	(7)	49.16	(6)	299.1	(24)

ELECTRIC UTILITY DECISIONS

<u>Date</u>	<u>Company (State)</u>	<u>ROR %</u>	<u>ROE %</u>	<u>Common Eq. as % Cap. Str.</u>	<u>Test Year & Rate Base</u>	<u>Amt. \$ Mil.</u>
1/23/15	PacifiCorp (WY)	7.41	9.50	51.43	6/15-A	20.2
2/4/15	Monongahela Power/Potomac Ed. (WV)	--	--	--	12/13	124.3 (B,1)
2/18/15	Virginia Electric and Power (VA)	7.88	11.00	52.03	3/16-A	36.9 (LIR,B,2)
2/24/15	Public Service Co. of Colorado (CO)	7.55	9.83	56.00	12/13-YE	-39.4 (I,B)
3/2/15	Black Hills Power (SD)	7.76	--	--	9/13-A	6.9 (I,B)
3/12/15	Virginia Electric and Power (VA)	8.40	12.00	52.03	3/16-A	-6.4 (LIR,3)
3/12/15	Virginia Electric and Power (VA)	7.88	11.00	52.03	3/16-A	11.4 (LIR,B,4)
3/12/15	Virginia Electric and Power (VA)	7.88	11.00	52.03	3/16-A	5.8 (LIR,5)
3/18/15	Jersey Central Power & Light (NJ)	8.01	9.75	50.00 (Hy)	12/11-YE	-115.0 (D)
3/25/15	PacifiCorp (WA)	7.30	9.50	49.10 (Hy)	12/13-A	9.6
3/26/15	Northern States Power-Minnesota (MN)	7.37	9.72	52.50	12/14-A	149.4 (R,E,I,Z)
2015	1ST QUARTER: AVERAGES/TOTAL OBSERVATIONS	7.74 10	10.37 9	51.91 9		203.7 11
4/9/15	Metropolitan Edison (PA)	--	--	--	4/16	105.7 (D,B)
4/9/15	Pennsylvania Electric (PA)	--	--	--	4/16	107.8 (D,B)
4/9/15	Pennsylvania Power (PA)	--	--	--	4/16	25.5 (D,B)
4/9/15	West Penn Power (PA)	--	--	--	4/16	95.2 (D,B)
4/14/15	Public Service Oklahoma (OK)	7.63	--	--	7/13-YE	-4.8 (I,B)
4/21/15	Virginia Electric & Power (VA)	7.88	11.00	52.03	8/16-A	60.5 (LIR,Z,B,6)
4/23/15	Wisconsin Public Service (MI)	6.01	10.20	--	12/15	4.0 (Z,B)
4/29/15	Union Electric (MO)	7.60	9.53	51.76	3/14-YE	121.5
5/1/15	Cross Texas Transmission (TX)	6.11	9.60	40.00	9/14-YE	30.9 (B,7)
5/26/15	Appalachian Pow./Wheeling Pow. (WV)	7.38	9.75	47.16	12/13-A	123.5
6/15/15	Northern States Power-Minnesota (SD)	7.22	--	--	12/13-A	15.2 (I,B)
6/17/15	Central Hudson Gas & Electric (NY)	6.62	9.00	48.00	6/16-A	15.3 (D,B,8)
6/17/15	Consolidated Edison of New York (NY)	6.91	9.00	48.00	12/16-A	-- (D,B,9)
6/22/15	Kentucky Power (KY)	--	--	--	9/14	-23.0 (B)
6/24/15	Empire District Electric (MO)	--	--	--	4/14	17.1 (B)
6/30/15	Kentucky Utilities (KY)	--	--	--	6/16	125.0 (B)
6/30/15	Louisville Gas & Electric (KY)	--	--	--	6/16	0.0 (B)
2015	2ND QUARTER: AVERAGES/TOTAL OBSERVATIONS	7.04 9	9.73 7	47.83 6		819.4 16
7/7/15	Mississippi Power (MS)	--	--	--	--	0.0 (10)
9/2/15	Kansas City Power & Light (MO)	7.53	9.50	50.09	3/14-YE	89.7 (B,11)
9/10/15	Kansas City Power & Light (KS)	7.44	9.30	50.48	6/14-YE	40.1 (B,11)
9/23/15	South Carolina Electric & Gas (SC)	8.57	--	52.66	6/15-YE	64.5 (12)
9/24/15	Westar Energy (KS)	--	--	--	9/14	185.3 (B)
2015	3RD QUARTER: AVERAGES/TOTAL OBSERVATIONS	7.85 3	9.40 2	51.08 3		379.6 5
2015	YEAR-TO-DATE: AVERAGES/TOTAL OBSERVATIONS	7.47 22	10.01 18	50.41 18		1,402.7 32

GAS UTILITY DECISIONS

<u>Date</u>	<u>Company (State)</u>	<u>ROR</u> <u>%</u>	<u>ROE</u> <u>%</u>	<u>Common</u> <u>Eq. as %</u> <u>Cap. Str.</u>	<u>Test Year</u> <u>&</u> <u>Rate Base</u>	<u>Amt.</u> <u>\$ Mil.</u>
1/13/15	Consumers Energy (MI)	--	10.30	--	12/15	45.0 (I,B)
1/14/15	Indiana Gas (IN)	--	--	--	6/14-YE	5.7 (LIR,13)
1/14/15	Southern Indiana Gas & Electric (IN)	--	--	--	6/14-YE	1.5 (LIR,13)
1/21/15	North Shore Gas (IL)	6.26	9.05	50.48	12/15-A	3.5 (R)
1/21/15	Peoples Gas Light & Coke (IL)	6.56	9.05	50.33	12/15-A	71.1 (R)
1/26/15	Piedmont Natural Gas (NC)	--	--	--	10/14	26.6 (LIR,14)
1/27/15	Atmos Energy (KS)	--	--	--	9/14-YE	0.3 (LIR,15)
1/27/15	Northern States Power-Minnesota (MN)	--	--	--	12/15	14.7 (LIR,16)
1/28/15	Northern Indiana Public Service (IN)	--	--	--	6/14-YE	0.3 (LIR,17)
2015	1ST QUARTER: AVERAGES/TOTAL	6.41	9.47	50.41		168.7
	OBSERVATIONS	2	3	2		9
4/7/15	Delta Natural Gas (KY)	--	--	--	12/14-YE	1.3 (LIR,18)
4/9/15	Avista Corporation (OR)	7.52	9.50	51.00	12/15-A	5.3 (B)
5/11/15	Atmos Energy (TN)	7.73	9.80	53.13	5/16-A	0.7 (B)
5/13/15	Missouri Gas Energy (MO)	--	--	--	2/15-YE	2.8 (LIR,19)
5/20/15	Laclede Gas (MO)	--	--	--	2/15-YE	5.5 (LIR,19)
6/17/15	Central Hudson Gas & Electric (NY)	6.62	9.00	48.00	6/16-A	1.8 (B,20)
6/26/15	Liberty Utilities EnergyNorth (NH)	--	--	--	3/14	10.5 (I,B,21)
6/30/15	Louisville Gas & Electric (KY)	--	--	--	6/16	7.0 (B)
2015	2ND QUARTER: AVERAGES/TOTAL	7.29	9.43	50.71		34.9
	OBSERVATIONS	3	3	3		8
7/22/15	Indiana Gas (IN)	--	--	--	12/14-YE	5.5 (LIR,13)
7/22/15	Southern Indiana Gas & Electric (IN)	--	--	--	12/14-YE	3.2 (LIR,13)
7/28/15	Atmos Energy (TX)	--	--	--	12/14-YE	52.6 (I,B)
8/21/15	Columbia Gas of Virginia (VA)	7.35	9.75	42.01	12/13	25.2 (B)
8/25/15	CenterPoint Energy Resources (TX)	--	--	--	9/14	4.9 (B,22)
9/16/15	Liberty Utilities (Midstates N.G.) (MO)	--	--	--	5/15	0.3 (LIR,23)
9/23/15	Atmos Energy (KY)	--	--	--	9/16-YE	3.8 (LIR,18)
2015	3RD QUARTER: AVERAGES/TOTAL	7.35	9.75	42.01		95.5
	OBSERVATIONS	1	1	1		7
2015	YEAR-TO-DATE: AVERAGES/TOTAL	7.01	9.49	49.16		299.1
	OBSERVATIONS	6	7	6		24

FOOTNOTES

A- Average

B- Order followed stipulation or settlement by the parties. Decision particulars not necessarily precedent-setting or specifically adopted by the regulatory body.

COC- Case involved only the determination of cost-of-capital parameters.

CWIP- Construction work in progress

D- Applies to electric delivery only

DCt Date certain rate base valuation

E- Estimated

F- Return on fair value rate base

Hy- Hypothetical capital structure utilized

I- Interim rates implemented prior to the issuance of final order, normally under bond and subject to refund.

LIR Limited-issue rider proceeding

M- "Make-whole" rate change based on return on equity or overall return authorized in previous case.

R- Revised

Te- Temporary rates implemented prior to the issuance of final order.

U- Double leverage capital structure utilized.

W- Case withdrawn

YE- Year-end

Z- Rate change implemented in multiple steps.

* Capital structure includes cost-free items or tax credit balances at the overall rate of return.

- (1) Consolidated rate proceeding for Monongahela Power and Potomac Edison, whose rate schedules were combined.
- (2) Increase authorized through a surcharge, Rider W, which reflects in rates the investment in the Warren County Power Station. The indicated overall return and capital structure are place-holders pending a 2105 biennial review.
- (3) This proceeding determines the revenue requirement for Rider B, which is the mechanism through which the company recovers costs associated with its plan to convert the Altavista, Hopewell, and Southampton Power Stations to burn biomass fuels. The indicated overall return and capital structure are placeholders pending a 2015 biennial review.
- (4) Represents rate increase associated with the company's Rider R proceeding, which is the mechanism through which the company recovers the investment in the Bear Garden generating facility. The indicated overall return and capital structure are placeholders pending a 2015 biennial review.
- (5) This proceeding determines the revenue requirement for Rider S, which recognizes in rates the company's investment in the Virginia City Hybrid Energy Center. The indicated overall return and capital structure are placeholders pending a 2015 biennial review.
- (6) This proceeding determines the revenue requirement for Rider BW, which recognizes in rates the company's investment in the Brunswick Generating Station. The indicated overall return and capital structure are placeholders pending a 2015 biennial review.
- (7) Indicated rate increase is for base rates and reflects the transfer to base rates of \$30.1 million that was being collected through the company's interim transmission cost of service adjustment mechanism. The net overall rate increase is \$0.8 million.
- (8) The approved final Joint Proposal provides for the company to implement a \$15.3 million electric rate increase, effective July 1, 2015, based on a 9% return on equity (48% of capital) and a 6.62% overall return, a \$16 million increase on July 1, 2016, based on the same return parameters, and a \$14.1 million increase on July 1, 2017, that reflects a 9% return on equity (48% of capital) and a 6.58% overall return.
- (9) Joint Proposal adopted that extends the company's existing rate plan by one year through 12/31/16. Rates were not changed.
- (10) On 7/7/15, the PSC issued an order on remand directing the company to cease collecting CWIP-related rate increases effective 7/20/15, and to submit a refund plan. This PSC action is the result of a 2/12/15 Mississippi Supreme Court decision that reversed and remanded the PSC's 3/5/13 decision in the proceeding that had authorized the company a two-step \$156 million rate increase related to the Kemper generation plant.
- (11) Approved settlements did not address rate-of-return issues.
- (12) Case involves company's request for a cash return on incremental V.C. Summer Units 2 and 3 CWIP and incorporates the 11% ROE that was initially authorized in 2009 for use in Summer CWIP-related proceedings.
- (13) Proceeding to establish the rates to be charged to customers under the company's "compliance and system improvement adjustment" mechanism.
- (14) Case involves the company's Integrity Management Rider, under which it is authorized to track and recover prudently
- (15) Case involves an update to the company's gas system reliability surcharge rider.
- (16) Case represents the company's first filing under its Gas Utility Infrastructure Cost Rider.
- (17) This is the initial proceeding to establish the rates to be charged to customers under the company's transmission, distribution, and storage system improvement charge rate adjustment mechanism.
- (18) Case represents an annual update to the company's pipe replacement program rider.

FOOTNOTES (continued)

- (19) Case represents an update to the company's semi-annual infrastructure system replacement surcharge rider.
- (20) The approved final Joint Proposal provides for the company to implement a \$1.8 million gas rate increase, effective July 1, 2015, based on a 9% return on equity (48% of capital) and a 6.62% overall return, a \$4.6 million increase on July 1, 2016, based on the same return parameters, and a \$4.4 million increase on July 1, 2017, that reflects a 9% return on equity (48% of capital) and a 6.58% overall return.
- (21) Indicated \$10.5 million rate increase excludes a \$1.9 million "step" increase for capital additions that was effective July 1, 2015.
- (22) New rates effective 10/1/15, as estimated by RRA.
- (23) Case represents annual update to company's infrastructure system replacement surcharge rider.

Dennis Sperduto





Rating Update: Moody's affirms VMIG-1 short-term rating for NYPA's ART notes in light of scheduled termination of underlying supporting facility

Global Credit Research - 06 Aug 2015

Affirms long-term Aa1 on senior lien debt and P-1 on commercial paper

NEW YORK STATE POWER AUTHORITY
Electric Distribution and Generation
NY

NEW YORK, August 06, 2015 --Moody's Investors Service has affirmed the VMIG-1 short-term rating on the New York State Power Authority's (NYPA) approximately \$85 million Adjustable Rate Tender Notes in conjunction with the scheduled September 1, 2015 termination of its underlying supporting credit facility. Moody's has also affirmed the long-term Aa1 rating on NYPA's approximately \$1 billion of outstanding senior bonds and the P-1 rating on its Series 1, 2, 3, and its extendible commercial paper notes. The rating outlook is stable.

SUMMARY RATING RATIONALE

The VMIG-1 variable rate bond and P-1 commercial paper ratings reflect NYPA's strong internal liquidity position, as demonstrated by over 200 days of liquidity on hand and about two times coverage of maximum expected commercial paper outstanding with readily available funds excluding external facilities. Including external facilities, coverage would increase to about three times. The ratings also considers NYPA's disciplined financial management and the Aa1 rating for its long-term senior debt obligations.

NYPA's Aa1 long-term senior revenue bond rating is driven by its unique position as the provider of reliable, low-cost, primarily hydro-electric power in the State of New York and its role as an engine for business development. The rating reflects prudent financial management policies that have consistently resulted in financial metrics that are among the strongest of all U.S public power electric utilities with generation ownership in our rated universe.

OUTLOOK

The stable outlook considers NYPA's strong management of its financial operations, limited leverage and favorable cost position. The stable outlook assumes NYPA's capital program will be financed in a balanced manner and that it will be able to recover the costs of these programs in a timely fashion. The outlook assumes that growing energy efficiency programs are managed in a way to limit counterparty credit exposure. The stable outlook assumes NYPA will adjust expenditures as necessary to manage through the impact of current low energy prices and lower than forecast hydro flows on its income from the sale of excess hydro generation, and that on average, its credit metrics will remain robust.

WHAT COULD MAKE THE RATING GO UP

-The rating is not likely to move upward from its current Aa1 level

WHAT COULD MAKE THE RATING GO DOWN

-Additional unexpected transfers to the State of New York

-The Authority funding its capital program in a manner that was inconsistent with maintaining or improving financial metrics

-If the Authority were to be unable or unwilling to recover the cost of these programs

-Annual fixed charge coverage remaining below 2.0 x on a sustained basis

-Significant losses relating to NYPA's energy efficiency programs

STRENGTHS

- Competitive advantage provided by well-run low-cost hydro units
- Instrumentality of the State - key to achieving economic development and policy goals
- Strong internal financial liquidity and fixed charge coverage with limited use of leverage

CHALLENGES

- Recently demonstrated earnings volatility associated with the sale of excess generation
- Significant, over \$2 billion, capital improvement to be undertaken in conjunction with State policy goals
- Exposure to interest rate volatility/counter party credit risk as a result of expanding energy efficiency programs
- Has been called upon to provide financial support to the State

RECENT DEVELOPMENTS

NYPA's approximately \$85 million Adjustable Rate Tender (ART) notes outstanding are currently supported by a credit facility provided by The Bank of Nova Scotia (Aa2 negative) which is scheduled to mature on September 1, 2015. Going forward, NYPA will support the notes, which amortize regularly through maturity in March 2020, with internal liquidity along with a \$20 million dedicated debt service reserve.

NYPA's earnings in 2015 are being impacted by a combination of low energy prices and hydro flows that are lower than forecast. NYPA is currently forecasting 2015 net income to be about \$80 million, down from a forecast of approximately \$205 million in October 2014. While hydro flows remain above the long-term average, they were impacted by ice conditions in the Great Lakes and are about 5% lower than NYPA's budget forecast. In addition, the price at which NYPA has been able to sell its excess hydro generation into the New York power markets has been over 20% lower than forecast. To the extent these conditions persist, such that we anticipate NYPA's cash flow coverage of its fixed obligations would remain below 2.0x, there could be downward pressure on the rating.

DETAILED RATING RATIONALE

REVENUE GENERATING BASE

Competitive advantage provided by low-cost hydro generation assets

As the owner of approximately 3,200 MW of Great Lakes basin hydro-electric generation facilities, NYPA is uniquely positioned to provide its customers with some of the nation's lowest cost, most dependable, electric power. At average water flow, NYPA hydroelectric generation represents about 70% of NYPA's net generation. The plants have historically demonstrated very high levels of availability, with factors that average around 90%.

The average annual generation from the plants over the past 5 years was 20.6 TWh versus a long term average of 20.2 TWh. Generation in 2014 was 20.7 TWh compared to a budget of 19.95 TWh, and water levels in Lakes Superior and Michigan were reported to be at their highest levels since the late 1990s. This resulted in NYPA aggressively forecasting 2015 production of 22.6 TWh in October 2014. However, lower than anticipated precipitation and ice conditions led the forecast to be subsequently revised down to 21.4 TWh, which is still above the long-term average.

The average production cost of NYPA's hydroelectric generation is in the \$10/MWh range which compares very favorably to the regional marginal cost of power. As discussed below, the benefit of this low cost power is passed on, in some form or fashion, to the majority of NYPA's customers based on Federal and/or State law.

Another factor enabling NYPA to provide low-cost power to its downstate customers is its ownership of a 500 MW gas-fired plant in Astoria Queens, as well as 500 MW contracted from Astoria Energy II. NYPA also owns approximately 1,400 circuit miles of transmission, more than any state utility. NYPA estimates that its customers' costs are over 20% below competitors' rates.

NYPA serves as an instrumentality of the State and plays a key part in its economic development goals

NYPA derives its authority from New York's Power Authority Act, which also makes NYPA responsible for providing transmission and generation services to New York customers. One of NYPA's major missions is supporting economic development in upstate New York by providing low-cost energy and capacity to large high load factor industries and employers. NYPA also provides an essential service to its downstate governmental and

non-profit customers, such as the Metropolitan Transit Authority (MTA); the City of New York; the Port Authority of New York and New Jersey; the New York City Housing Authority; New York State Office of General Services; and Westchester County. NYPA provides them a relatively low cost power option, and has historically been called upon for special projects to assure grid reliability and resource capacity in the New York City area. NYPA has been able to fulfill its important role while maintaining financial discipline and a very strong balance sheet. The Aa1 rating assumes this historic financial discipline will continue and also assumes NYPA will ultimately be able to recover the costs associated with responding to additional State objectives.

NYPA is generally insulated from the operational and financial risks of serving its downstate customers. The New York City Governmental customers are served under contracts with rates that adjust annually to reflect increases in fixed costs and monthly to pass-through changes in variable costs including fuel and purchased power and NYISO-related costs. The current contracts expire December 31, 2017 and the customers also have a right to terminate the service with notice. However, in the event of a termination, the customers would have to compensate NYPA for any above market costs associated with purchased power resources used to supply them, including any energy/capacity hedges. They would also be required to assume the contract for the purchase of capacity from the 550 MW gas-fired Astoria Energy II project that was put in place to serve them.

FINANCIAL OPERATIONS AND POSITION

Prudent management results in strong financial position

The financial flexibility provided by NYPA's strong balance sheet and debt service coverage ratios are a key factor in its Aa1 rating. Historically, NYPA pursued an aggressive debt-management strategy targeted at eliminating generation-related debt with the intent of lowering its fixed costs and thus its customers' power rates. As a result, it reduced outstanding revenue bond debt (including commercial paper notes) to about \$1.7 billion in 2014 from \$3.5 billion in 1994. The strategy has positioned NYPA well to implement its current large capital program, and as a result, total funded debt is expected to remain fairly constant about \$1.7 billion. This is consistent with NYPA's goal of maintaining a ratio of 35% debt-to-capital (excluding capital leases).

NYPA has also been proactive in implementing rate increases to recover the cost of increased investments in its hydro-electric assets and its transmission system. In 2011, the board approved four year rate increases for its hydro customers that were phased in through 2014, and in 2013 NYPA received FERC approval for its first ever transmission rate increase. As a result, NYPA's fixed obligation coverage ratios, as calculated by Moody's on the basis of net revenues derived from the income statement after State contributions and including capital lease payments, has averaged above 2.4 times, which scores near the upper end of the Aa range for that metric in our rating methodology for U.S. Public Power Electric Utilities with Generation Ownership Exposure (the Rating Methodology).

We note that NYPA's strong coverage ratios are somewhat vulnerable to hydrology risk and price risk, as is demonstrated by the decrease in forecasted 2015 revenues between October 2014 and July 2015. Although hydrology risk is mitigated somewhat by the interruptible nature of its supply contracts, NYPA's hydro facilities generate significantly more power than NYPA requires to serve its customers. The excess (historically approximately 5-6 TWhs per year) is sold into the New York power markets at prevailing prices. As prices in NY Zone A have been over 20% below NYPA's forecast, there has been a significant impact on NYPA's 2015 results. While we expect NYPA's fixed obligation coverage ratios will remain strong, for 2015, we currently expect this metric to fall below 2.0 times. To the extent these conditions persist, and we anticipate NYPA's cash flow coverage of its fixed obligations would remain below 2.0x, there would likely be downward pressure on the rating.

Liquidity

NYPA's liquidity position is very strong. As of year-end 2014 the Authority had approximately \$1.3 billion (193 days) of unrestricted cash on hand and over \$200 million available under its commercial paper programs, bringing total available liquidity to over 200 days of operating expenses.

NYPA's external liquidity includes various commercial paper programs that have a total face amount of \$1.2 billion and are supported by \$600 million of revolving credit facilities. By board resolution, issuance under the program may not exceed the amount of available revolving credit. As of December 31, 2014, there was approximately \$476 million of commercial paper outstanding as part of programs designed to fund energy efficiency programs for qualified participant. The existing revolving credit facilities are scheduled to terminate in January 2017.

NYPA also has a \$200 million extendible commercial paper program, which does not have revolver backing. Under this program, any commercial paper not repaid on its specified repayment date automatically becomes due

270 days later. This program was primarily put in place to take out debt incurred in conjunction with NYPA's construction of its 500 MW gas plant. NYPA has been reducing amounts outstanding under the program according to a schedule that is similar to the original debt amortization schedule. As of December 31, 2014, there was \$53 million of commercial paper outstanding under this program.

Going forward, NYPA anticipates funding a significant portion of its internal capital expenditure program from internal sources, with only a modest (approximately 1/3) portion of debt financing.

Significant capital improvement program

NYPA estimates expenditures for its internal capital improvement program over the 2015-2018 period will be approximately \$1.4 billion. Average annual expenditures of about \$300 million per year are about twice that of prior periods. The majority of the expenditures over the period will be made in conjunction with transmission upgrades including an approximately \$726 million, 12 year, transmission life extension and modernization (TLEM) project that will be part of NYPA's initiative to improve grid reliability. Life extension and management activities are also planned at the Niagara Lewiston pumped storage plant. NYPA anticipates these projects will be funded in a manner consistent with its targeted capitalization of about 1/3 debt to capital, and indicates they have accumulated over \$800 million in a capital reserve for these projects. As a result, debt outstanding is expected to remain fairly constant. NYPA has a history of successful project completion, and we anticipate the costs of these projects will ultimately be recovered through timely adjustments to customer rates.

Expansion of energy efficiency programs

In addition to its internal capital program, NYPA's 2015-2018 capital budget includes about \$800 million for energy efficiency improvements attributed to the BuildSmart NY initiative. This particular program has been spurred by a 2012 Executive Order from the Governor directing state agencies to collectively reduce consumption at state owned buildings by 20 percent within seven years. As part of this initiative, NYPA has offered to provide \$450 million in low-cost financing for state owned buildings, and another \$350 million for towns and municipalities and certain other non-for profits, to complete energy efficiency projects. NYPA has had a similar program in place for governmental customers and state owned buildings since the 1980s, with program expenditures in the range of \$200 million per year. Going forward, the program has been expanded to a wider range of customers, and the annual expenditures are expected to increase by about \$25-\$50 million per year program wide.

The cost of the programs, including financing, are ultimately paid by the program participants, the largest of which the City of New York. The recovery time on the investments is tied to the savings of the program participants; this could be as long as, on average, seven to ten years, but historically about half of the funds lent by NYPA have been returned upon project completion, or in about six to eighteen months. Given the short term nature of the investments, NYPA has historically funded the program entirely through the issuance of commercial paper. As a result NYPA's balance sheet includes a relatively large component of variable rate debt (approximately 20%); however, as the cost of the financing is passed directly to the program participants, NYPA's is shielded from interest rate risk, but exposed to the credit risk. To date, there have been no losses on the program. Historically the incentive was focused only on state customers, going forward it will also include municipalities and certain non-profits such as hospitals and universities, however, the City of New York is still expected to remain the most significant participant. NYPA management is focused on ways to best manage this potential additional credit exposure and to consider alternate forms of financing rather than its commercial paper program.

NYPA has been called upon to provide financial support to the State

NYPA is fiscally independent from the State and it receives no tax revenue. The Authority's rates are set by its board of trustees without the need for state regulatory board approval and NYPA has a history of adjusting its rates as necessary to recover the cost of operating and investing in its system while maintaining a strong financial position. The Authority is however authorized to make annual voluntary contributions to the State, which is typically done in conjunction with the State budget. In 2014 and 2015, annual contributions of \$90 million were authorized, which is equal to about 3% of revenues and is considered manageable. Some protection for the Authority and its bondholders is given by the board's stated policy of using a 2.00 times debt service coverage ratio as a reference point in considering any transfer of funds.

In 2009, as a result of fiscal stress at the State level, additional temporary transfers totaling \$318 million were made out of funds on hand in NYPA's spent fuel and capital project reserves. These funds have now begun to be returned in annual installments. Since 2009, the financial position of State of New York has improved, and in June 2014 its General Obligation bonds were upgraded to Aa1. As a result, we do not anticipate the State will be requesting additional temporary transfers in the foreseeable future. To the extent the State were to tap NYPA's

cash reserves above recent levels, it could put downward pressure on the rating of NYPA.

DEBT AND OTHER LIABILITIES

Debt Structure

As of December 31, 2014, NYPA's total debt outstanding (including capital lease obligations of about \$1.2 billion) was about \$2.9 billion. The total includes approximately \$941 million in senior revenue bonds, \$96 million in ART Notes, \$23.6 million in subordinate notes (not rated by Moody's), and \$536 million in commercial paper. Moody's calculated debt ratio (total debt / (fixed assets plus working capital)) is about 46%, which is one of the lowest of any major U.S. public power electric utility with generation in our rated universe.

NYPA's approximately \$85 million ART notes outstanding are currently supported by a credit facility provided by The Bank of Nova Scotia (Aa2 stable) which is scheduled to mature on September 1, 2015. Going forward, NYPA will support the notes, which amortize regularly through maturity in March 2020, with internal liquidity along with a \$20 million dedicated debt service reserve.

NYPA's Series 1, 2 and 3 commercial paper programs have face amounts of \$400 million, \$450 million and \$350 million respectively; however, by board resolution, issuance under the programs may not exceed the amount of support available under its external credit facilities. NYPA has a \$600 million revolving credit facility which is scheduled to terminate on or about January 15, 2017, for the payment of principal and interest on the commercial paper notes. Draws under the facility require a bring-down of representations and warranties, including that of no material adverse change in financial position; however, the inability to make this representation does not preclude draws but limits their maturity to 180 days.

The commercial paper notes, and the obligation of NYPA to reimburse the banks for loans made under the revolving credit agreement, are subordinate to the revenue bonds of the authority.

Debt-Related Derivatives

NYPA uses interest rate swaps to fix the interest rate on the ART notes. As of December 31, 2014 the mark-to-market on the interest rate swaps was negative \$5 million.

Pensions and OPEB

NYPA and substantially all its employees participate in the New York State and Local Employees' Retirement System and the Public Employees' Group Life Insurance Plan. NYPA's contributions for 2014, 2013 and 2012 were \$28 million, \$29 million and \$27 million, respectively, or 100% of the actuarially required contributions for each year.

NYPA has maintained a trust for OPEB obligations since 2006. As of December 31, 2014, the balance in the trust was \$467 million and the accrued actuarial liability was \$606 million, resulting in the plan being 77% funded. NYPA's OPEB liability in 2014 was \$38 million.

MANAGEMENT AND GOVERNANCE

NYPA is governed by a seven-member Board of Trustees who are nominated by the Governor and confirmed by the State Senate. The board has broad rate setting authority for its power sales agreements as well as its tariff customers. Transmission rates are regulated by the Federal Energy Regulatory Commission. NYPA management has prudent debt and risk management policies and maintains strong internal financial liquidity.

KEY STATISTICS

-Debt Service Coverage 2014 (3-yr avg): 2.58x (2.42x)

-Days liquidity on hand 2014 (3-yr avg): 227 (241)

-Debt ratio 2014 (3-yr avg): 46% (49%)

OTHER CONSIDERATIONS

Moody's evaluates NYPA's financial performance relative to the U.S. Public Power Electric Utilities with Generation Ownership Exposure methodology, and as depicted below, the grid indicated rating for NYPA is Aa2, one notch below NYPA's current Aa1 rating. We note that the credit metrics scored in Factor 5 - Financial Strength

are generally all at the upper end of their respective scoring ranges. We also note the scope of NYPA's operations and integral role in delivering the State's long term policy objectives.

The grid is a reference tool that can be used to approximate credit profiles in the public power industry in most cases. However, the grid is a summary that does not include every rating consideration. Please see the U.S. Public Power Electric Utilities with Generation Ownership Exposure methodology for more information about the limitations inherent to grids.

METHODOLOGY SCORECARD FACTORS

Factor 1 - Cost Recovery Framework within Service Territory (25% weight): Aaa

Factor 2 - Willingness to Recover Costs with Sound Financial Metrics (25% weight): Aa

Factor 3 - Management of Generation Risk (10% weight): Aa

Factor 4 - Competitiveness (10% weight): Aaa

Factor 5 - Financial Strength - Adjusted Days liquidity on Hand (3 year average - 241; 2014 - 227): Aa

Factor 5 - Financial Strength - Debt Ratio (3 year average - 49%; 2014 - 47%): Aa

Factor 5 - Financial Strength - Adjusted Debt Service Coverage (3 year average - 2.42; 2013 - 2.58): Aa

Scorecard Indicated Rating (before notching): Aa1

Notching Factors - Financial (DSRF below maximum annual debt service): -0.5

Scorecard Indicated Rating: Aa2

KEY CONTACT

Brian McElroy, Treasurer (914) 287-3956

OBLIGOR PROFILE

The New York State Power Authority was created in 1931 and formed the basis for later federal power initiatives such as the Tennessee Valley Authority and the Bonneville Power Authority. NYPA is primarily a provider of wholesale power, but it also has a large direct industrial and commercial customer base, which is growing as a result of State mandated programs such as Recharge NY that are designed to support business development through the provision of low-cost electricity. NYPA's customers include 51 New York municipal and rural cooperatives electric systems, seven out-of-state public systems, three investor-owned utilities, two public transportation agencies, over 100 public agencies in southeast New York, and over 600 individual business or non-for profit customers. About 64% of 2014 revenues were derived from southeast New York governmental customers (representing about 25% of volume); about 12% from upstate New York hydro customers (includes municipal and industrial); 6% from transmission customers. Hydro generation accounts for about half of NYPA's delivered energy, and about 70% of its own production.

LEGAL SECURITY

NYPA's revenue bonds are payable and secured by a pledge of the Trust Estate including all revenues derived from the operation of any of NYPA's facilities. The rate covenant is sum sufficient. Moody's considers the security provisions weak because there is no debt service reserve account other than \$20 million designated for the 1985 adjustable rate tender notes (currently approximately \$85 million outstanding). This risk is mitigated to some extent by the Authority's very strong internal liquidity, which includes over 200 days of adjusted liquidity on hand. The Power Authority Act constitutes a pledge of the state to debt obligation holders not to limit or alter the rights vested in the NYPA until such obligations are met.

PRINCIPAL METHODOLOGY

The principal methodology used in this rating was U.S. Public Power Electric Utilities with Generation Ownership Exposure published in November 2011. The additional methodology used was Rating Methodology for Municipal Bonds and Commercial Paper Supported by a Borrower's Self-Liquidity published in January 2012. Please see the Credit Policy page on www.moodys.com for a copy of these methodologies.

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Summary:

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Rationale

Outlook

Related Criteria And Research

Summary:**New York State Power Authority; CP; Wholesale Electric**

Credit Profile		
US\$67.675 mil rev bnds ser 2015A		
<i>Long Term Rating</i>	AA/Stable	New
New York St Pwr Auth wholesale elec		
<i>Long Term Rating</i>	AA/A-1+/Stable	Upgraded
New York St Pwr Auth wholesale elec		
<i>Long Term Rating</i>	AA/Stable	Affirmed

Rationale

Standard & Poor's Ratings Services has assigned its 'AA' long-term rating to the New York State Power Authority's (NYPA) \$67.7 million, series 2015A revenue bonds due Nov. 15, 2020. At the same time, Standard & Poor's raised the short-term component of the rating on the NYPA's \$86.2 million of senior-lien 1985 adjustable-rate tender (ART) notes to 'AA/A-1+' from 'AA/A-1.'

In addition, Standard & Poor's affirmed its 'AA' rating on \$941 million of parity debt, and its 'A-1+' short-term rating on the authority's subordinate lien series 1-3 commercial paper (CP) and its series 1 extendible municipal CP (EMCP) notes. The CP and EMCP balance outstanding as of June 30, 2015 was \$525 million. The outlook on the long-term rating is stable.

The higher rating on the ART notes reflects the NYPA's election to use its own liquidity in lieu of external liquidity to cover the notes' tender events. By migrating to self-liquidity, we are tying the rating to the authority's capacity to cover the contingent demand on liquidity. Historically, the rating's short-term component reflected the credit quality of the bank that provided a revolving credit agreement that the NYPA secured to meet the notes' liquidity exposure. Standard & Poor's has determined that authority maintains liquidity adequate to meet this exposure.

Proceeds from the 2015A bonds will refund a portion of existing debt.

The authority pays debt service from the net revenues of its electric system.

The 'AA' rating reflects our view of the following strengths:

- The NYPA exhibited what we consider strong debt service coverage of direct debt of at least 3x since fiscal 2008 (year ended Dec. 31) and at least 5.5x in 2012-2014. Because of weak markets for surplus energy sales in 2015, the authority is projecting coverage will be lower in 2016-2019, but not below 2.7x.
- We treat recurring transfers to the state's economic development programs as operating expenses. We also treat as debt service a portion of tolling payments to other generation owners, rather than treat it as an operating expense,

because we view these payments as funding the developer's recovery of investments in generating assets. Although these adjustments dilute coverage, our calculations of fixed charge coverage was nevertheless strong, of at least 2.3x since 2010; it was about 3.0x in 2012-2014. Based on the NYPA's financial projections, we calculate that fixed charge coverage could be as low as 1.6x. We consider this to still be consistent with the rating when considered with the utility's \$1.3 billion of unrestricted cash and investments, moderate leverage, diverse power supply portfolio, favorable rates and broad customer base.

- The utility's debt burden is what we consider low, with a debt-to-capitalization ratio of 29% at Dec. 31, 2014, down substantially from 42% in 2009 and 55% in 2005. We believe the favorable ratio partially reflects the authority's debt reduction achievements and its reliance on other energy suppliers' generation resources to serve substantial portions of its customers' energy needs.
- Unrestricted cash and investments of \$1.3 billion at year-end 2014 represented more than six months' operating expenses.
- The NYPA benefits from autonomous rate-setting authority and is not subject to New York State Public Service Commission oversight. Nevertheless, we believe the state places meaningful financial demands on the utility that could erode financial strength and flexibility. Examples include annual transfer payments to the state, loans to the state and the state's directives that NYPA fund economic development programs.
- The authority serves a broad and economically diverse service territory.
- Strong demand for its low cost hydroelectric generation output accounts for more than half of its energy sales, but only about 20% of revenues. Nevertheless, hydroelectric resources are important contributors to the NYPA's financial margins, particularly because of the margins the utility derives from sales of surplus power from these resources.
- The authority benefits from its Southeastern New York customers' election to assume responsibility for variability in power supply costs the utility previously bore.
- Firm transmission rights provide the utility with a financially valuable corridor for moving power generated upstate to New York City.

We believe the utility faces the following exposures:

- As a state authority, the NYPA is exposed to substantial political influences, including pressure to contribute to and fund state economic development programs, which we view as having the potential to erode its financial strength. For example, the authority has been charged with making loans to further the state's energy efficiency goals. This nearly \$475 million program and other loan programs expose the utility to the creditworthiness of the programs' borrowers.
- The NYPA has a history of substantial transfers of surpluses to the state. Transfers of \$90 million in 2014 represented 3% of operating revenues, which was significantly lower than 2009's 4.6% of operating revenues and 2010's 5.7%. The authority lent \$318 million to the state in 2009 to help it address budget deficits. New York pledged to repay this loan in two installments: \$103 million in 2014 and \$215 million in 2017. Loan repayment hinges on legislative appropriations and the loans do not constitute state debt. The state did not repay the 2014 maturity in full. Rather, the NYPA expects the state to repay 2014's maturity in five annual installments. It received the first two installments, on Oct. 1, 2014, and Sept. 17, 2015. We view the state's substantial transfers and the loan as placing significant demands on liquidity.
- The authority projects nearly \$2 billion of 2015-2019 capital spending and projects debt balances will rise to about \$1.8 billion in 2018 and 2019 from \$1.6 billion at Dec. 31, 2014. The difference between the size of the capital program and the projected debt balances reflects the amortization of existing debt and the use of balance sheet cash and cash from operations to finance portions of the projects' costs.
- The NYPA projects that, at the state's direction, it will fund \$1 billion of energy efficiency and technology projects as

part of its capital program. Authority governmental customers will develop these projects. NYPA funding will come from debt proceeds and utility cash. Sales of hydroelectric facilities' output are important contributors to operating margins and their contributions are susceptible to compromise during periods of drought or low market electricity prices, which could erode financial performance. After facing lower-than-expected market prices for its surplus electricity in 2015, the authority has prepared financial forecasts with revenue estimates that reflect more conservative views of forward prices.

- Although customers of the utility's hydroelectric resources pay very low rates, they have historically resisted rate adjustments, which could erode financial flexibility. However, the authority implemented an 18% rate increases for its hydroelectric preference customers covering 2011-2014. The increases raised rates to \$13 per megawatt-hour from \$11.
- About 40% of debt obligations are variable-rate. The NYPA mitigates this risk through swaps and caps leaving unhedged about 34% of variable rate debt as a percent of total debt. We believe the ratings on the swap counterparties and the utility provide considerable headroom relative to the termination triggers in the swap documents.

The NYPA is a corporate municipal instrumentality and political subdivision of New York State. It primarily sells wholesale electricity to municipal utilities, governmental entities, large industrial and commercial customers, investor-owned utilities, and utilities in neighboring states. Its contracts tend to be medium-to-long-term.

Unlike many other utilities, the authority does not socialize its power supply costs across all customers. Rather, customers pay charges tied to the resources that supply their electricity needs. The utility's low-cost, hydroelectric portfolio mostly benefits its upstate customers. It also sells some of the hydroelectric output to industrial customers in New York State and municipalities within and outside the state. The industrial sales are made to support state economic development programs and the sales to municipalities to meet Federal Energy Regulatory Commission license obligations of the hydroelectric facilities. The authority principally serves its downstate governmental customers' needs with owned and contracted thermal resources that it supplements with market purchases.

The NYPA's upstate hydroelectric facilities continue to supply about 72% of the energy it sells. By comparison, the hydroelectric energy's consumers account for only about 28% of energy sales revenues. At the same time, downstate customers accounted for nearly 40% of energy sales and about 60% of revenues. Margins on the low-cost hydroelectric sales and transmission service are substantially greater than those from sales to downstate governmental bodies. Transmission services are also important to the utility's revenue stream.

Debt service coverage of all senior and subordinate capital market obligations has been at least 3x since fiscal 2009 and was 5.5x in 2012 and 2013 and 6.3x in 2014. Coverage ratios benefit from Entergy Corp.'s annual installment payments for its \$967 million purchase of NYPA's interests in the Indian Point 3 and James A. Fitzpatrick nuclear generating stations in 2000. The authority records Entergy's payments of about \$72 million per year on its income statement as other income. The payments continue through 2015. The utility will use three formulaic, inflation-indexed, adjustment mechanisms to temper the loss of the Entergy payments.

Standard & Poor's analysis also focuses on fixed-charge coverage. We view recurring transfer payments to the state and its economic development programs as operating expenses. In addition, we view tolling payments associated with the 500 MW Astoria Energy LLC combined cycle plant that was added in 2011 as funding the developer's recovery of its investment in the plant. Consequently, we calculate coverage ratios that reflect our view that tolling payments have

debt service characteristics rather than operating expense attributes. With these adjustments, coverage was about 3x in 2012-2014. Applying our adjustments to the authority's financial projections indicates it could achieve all-in fixed charge debt service coverage of at least 1.6 through 2019, which is about 100 basis points lower than the previous year's forecast, but still consistent with the rating.

The NYPA must maintain liquidity facilities sufficient to cover the CP's principal so long as it is outstanding. On Jan. 20, the authority plans to replace the expiring \$550 million revolving credit agreement with a \$600 million agreement that will expire Jan. 20, 2017. The note resolution authorizes up to \$1.2 billion of series 1-3 CP, but the revolving credit agreement's \$600 million commitment caps the amount of CP the authority can issue. The revolving credit agreement does not cover the NYPA's \$60 million of EMCP.

The banks' liquidity support obligations could terminate before expiration if there default events tied to the utility's creditworthiness have occurred. Consequently, the short-term CP rating reflects our view of the authority's capacity to service short-term obligations, rather than the banks' credit quality. Events that would lead to the liquidity facility's automatic termination include an authority insolvency proceeding and three rating agencies' assignment of speculative-grade ratings to the utility's parity subordinate-lien obligations.

The NYPA uses its own liquidity to cover the tender exposure associated with its ART notes. The 'A-1+' short-term component of our 'AA/A-1+' ratings on the ART notes reflect our view of the utility's ability to fund from its own liquidity notes that have been tendered but not remarketed. Standard & Poor's Funds Ratings group assesses the liquidity of the authority's fixed-income and certain equity assets. The short-term rating reflects what we consider the ample liquidity and sufficiency of the assets to guarantee the timely purchase of any obligation tendered in the event of a failed remarketing. Each month, Standard & Poor's monitors the liquidity and sufficiency of the NYPA's assets committed for this purpose.

Outlook

The stable outlook reflects our view of the utility's capacity to achieve strong debt service coverage and liquidity. Existing debt's amortization and plans to use cash to fund meaningful portions of the capital program should limit the amounts of additional debt. The level of transfer payments to state programs, and the state's timely repayment of the NYPA's loans to the state will be important to sustaining credit quality.

Downside scenario

Although the utility expects that weak market prices for its sales of surplus power could produce lower DSC during 2015-2019, we do not expect to lower the rating unless we see significant degradation of coverage and liquidity metrics.

Upside scenario

We do not expect to raise the rating during our two-year outlook period.

Related Criteria And Research

Related Criteria

- USPF Criteria: Electric And Gas Utility Ratings, Dec. 16, 2014
- USPF Criteria: Wholesale Utilities, May 24, 2005
- USPF Criteria: Commercial Paper, VRDO, And Self-Liquidity, July 3, 2007
- USPF Criteria: Methodology: Definitions And Related Analytic Practices For Covenant And Payment Provisions In U.S. Public Finance Revenue Obligations, Nov. 29, 2011
- USPF Criteria: Assigning Issue Credit Ratings Of Operating Entities, May 20, 2015
- Criteria: Use of CreditWatch And Outlooks, Sept. 14, 2009

Ratings Detail (As Of October 21, 2015)

New York St Pwr Auth CP

Short Term Rating

A-1+

Affirmed

New York St Pwr Auth wholesale elec

Unenhanced Rating

AA(SPUR)/Stable

Affirmed

New York St Pwr Auth CP

Short Term Rating

A-1+

Affirmed

Many issues are enhanced by bond insurance.

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ALLETE NYSE-ALE		RECENT PRICE	47.32	P/E RATIO	14.1	15.7	16.0	RELATIVE P/E RATIO	0.81	DIV'D YLD	4.4%	VALUE LINE							
TIMELINESS	3	Raised 4/24/15	High: 37.5	51.7	49.3	51.3	49.0	35.3	37.9	42.5	42.7	54.1	58.0	59.7	Target Price Range				
SAFETY	2	New 10/1/04	Low: 30.8	35.7	42.6	38.2	28.3	23.3	30.0	35.1	37.7	41.4	44.2	45.3	2018 2019 2020				
TECHNICAL	3	Raised 9/18/15													120				
BETA	.80	(1.00 = Market)													100				
2018-20 PROJECTIONS															80				
Price	60	Gain (+25%)													64				
High	60	Low	45	Ann'l Total Return	10%											48			
Insider Decisions															32				
to Buy	0	to Sell	0	Options	0	to Buy	0	to Sell	0	Options	0	to Buy	0	to Sell	0	20			
Institutional Decisions															16				
to Buy	97	to Sell	117	Percent shares traded	15											12			
Hld's(000)	32344	33487	35643													8			
1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC	18-20
--	--	--	--	--	25.30	24.50	25.23	27.33	24.57	21.57	25.34	24.75	24.40	24.60	24.77	27.75	29.05	Revenues per sh	34.00
--	--	--	--	--	2.97	3.85	4.14	4.42	4.23	3.57	4.35	4.91	5.01	5.35	5.68	6.30	6.40	"Cash Flow" per sh	7.75
--	--	--	--	--	1.35	2.48	2.77	3.08	2.82	1.89	2.19	2.65	2.58	2.63	2.90	3.30	3.20	Earnings per sh ^A	4.00
--	--	--	--	--	.30	1.25	1.45	1.64	1.72	1.76	1.76	1.78	1.84	1.90	1.96	2.02	2.10	Div'd Decl'd per sh ^B = †	2.40
--	--	--	--	--	2.12	1.95	3.37	6.82	9.24	9.05	6.95	6.38	10.30	7.93	12.48	5.70	4.75	Cap'l Spending per sh	5.50
--	--	--	--	--	21.23	20.03	21.90	24.11	25.37	26.41	27.26	28.78	30.48	32.44	35.06	37.30	38.45	Book Value per sh ^C	42.50
--	--	--	--	--	29.70	30.10	30.40	30.80	32.60	35.20	35.80	37.50	39.40	41.40	45.90	49.00	49.25	Common Shs Outst'g ^D	50.00
--	--	--	--	--	25.2	17.9	16.5	14.8	13.9	16.1	16.0	14.7	15.9	18.6	17.2	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	13.5
--	--	--	--	--	1.33	.95	.89	.79	.84	1.07	1.02	.92	1.01	1.05	.91			Relative P/E Ratio	.85
--	--	--	--	--	.9%	2.8%	3.2%	3.6%	4.4%	5.8%	5.0%	4.6%	4.5%	3.9%	3.9%			Avg Ann'l Div'd Yield	4.5%
CAPITAL STRUCTURE as of 6/30/15					737.4	767.1	841.7	801.0	759.1	907.0	928.2	961.2	1018.4	1136.8	1360	1430	Revenues (\$mill)	1700	
Total Debt \$1390.4 mill. Due in 5 Yrs \$281.9 mill.					68.0	77.3	87.6	82.5	61.0	75.3	93.8	97.1	104.7	124.8	160	155	Net Profit (\$mill)	195	
LT Debt \$1272.4 mill. LT Interest \$57.3 mill.					28.4%	37.5%	34.8%	34.3%	33.7%	37.2%	27.6%	28.1%	21.5%	22.6%	17.0%	14.0%	Income Tax Rate	14.0%	
Leases, Uncapitalized Annual rentals \$13.4 mill.					.4%	1.4%	6.6%	5.8%	12.8%	8.9%	2.7%	5.3%	4.4%	6.3%	3.0%	2.0%	AFUDC % to Net Profit	2.0%	
Pension Assets-12/14 \$544.2 mill. Oblig. \$714.5 mill.					39.1%	35.1%	35.6%	41.6%	42.8%	44.2%	44.3%	43.7%	44.6%	44.2%	44.0%	44.0%	Long-Term Debt Ratio	41.5%	
Pfd Stock None					60.9%	64.9%	64.4%	58.4%	57.2%	55.8%	55.7%	56.3%	55.4%	55.8%	56.0%	57.0%	Common Equity Ratio	58.5%	
Common Stock 48,850,462 shs.					990.6	1025.6	1153.5	1415.4	1625.3	1747.6	1937.2	2134.6	2425.9	2882.2	3250	3315	Total Capital (\$mill)	3625	
MARKET CAP: \$2.3 billion (Mid Cap)					860.4	921.6	1104.5	1387.3	1622.7	1805.6	1982.7	2347.6	2576.5	3286.4	3675	3750	Net Plant (\$mill)	4075	
ELECTRIC OPERATING STATISTICS					8.0%	8.6%	8.6%	6.7%	4.8%	5.4%	6.0%	5.6%	5.3%	5.2%	6.0%	5.5%	Return on Total Cap'l	6.5%	
% Change Retail Sales (KWH)					11.3%	11.6%	11.8%	10.0%	6.6%	7.7%	8.7%	8.1%	7.8%	7.8%	8.5%	8.0%	Return on Shr. Equity	9.0%	
Avg. Indust. Use (MWH)					11.3%	11.6%	11.8%	10.0%	6.6%	7.7%	8.7%	8.1%	7.8%	7.8%	8.5%	8.0%	Return on Com Equity ^E	9.0%	
Avg. Indust. Revs. per KWH (¢)					5.2%	5.0%	5.8%	3.9%	.5%	1.5%	2.9%	2.3%	2.2%	2.5%	3.5%	2.5%	Retained to Com Eq	3.5%	
Capacity at Peak (Mw)					54%	57%	51%	61%	93%	81%	66%	71%	72%	67%	61%	67%	All Div'ds to Net Prof	61%	
Peak Load, Winter (Mw) ^F					1633	1646	1637	1637	1637	1637	1637	1637	1637	1637	1637	1637			
Annual Load Factor (%)					79.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
% Change Customers (avg.)					+5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Fixed Charge Cov. (%)					341	306	345												
ANNUAL RATES					Past 10 Yrs	Past 5 Yrs	Past 3 Yrs	Est'd '12-'14											
of change (per sh)					10 Yrs	5 Yrs	3 Yrs	'12-'14											
Revenues					-5%	-	-	5.5%											
"Cash Flow"					6.0%	5.5%	6.5%												
Earnings					7.0%	1.0%	6.5%												
Dividends					NMF	2.0%	4.0%												
Book Value					4.5%	5.0%	4.5%												
QUARTERLY REVENUES (\$ mill.)					Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year									
2012					240.0	216.4	248.8	256.0	961.2										
2013					263.8	235.6	251.0	268.0	1018.4										
2014					296.5	260.7	288.9	290.7	1136.8										
2015					320.0	323.3	355	361.7	1360										
2016					350	345	365	370	1430										
EARNINGS PER SHARE ^A					Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year									
2012					.66	.39	.78	.75	2.58										
2013					.83	.35	.63	.82	2.63										
2014					.80	.40	.97	.73	2.90										
2015					.85	.46	.97	1.02	3.30										
2016					.90	.45	.90	.95	3.20										
QUARTERLY DIVIDENDS PAID ^B = †					Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year									
2011					.445	.445	.445	.445	1.78										
2012					.46	.46	.46	.46	1.84										
2013					.475	.475	.475	.475	1.90										
2014					.49	.49	.49	.49	1.96										
2015					.505	.505	.505												

(A) Diluted EPS. Excl. nonrec. gain (loss): '04, 2c; '05, (\$1.84); gain (losses) on disc. ops.: '04, \$2.57; '05, (16c); '06, (2c); loss from accounting change: '04, 27c. Next egs. report

due early Nov. (B) Div'ds historically paid in early Mar., June, Sept. and Dec. = Div'd reinvestment plan avail. † Shareholder investment plan avail. (C) Incl. deferred chgs. In '14:

\$7.78/sh. (D) In mill. (E) Rate base: Orig. cost deprec. Rate allowed on com. eq. in '10: 10.38%; earned on avg. com. eq., '14: 8.6%. Reg. Clim.: Avg. (F) Summer peak in '12 & '13.

Company's Financial Strength A
Stock's Price Stability 95
Price Growth Persistence 35
Earnings Predictability 80

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A development fee from a transaction will bolster ALLETE's earnings in the second half of 2015. ALLETE Clean Energy is building a wind facility that it will sell to a utility in North Dakota. The development fee from the transaction will amount to \$20 million-\$25 million (pretax) in the last two quarters of 2015. This will amount to \$0.25-\$0.30 a share, which we will include in our earnings presentation. As a result of this deal, ALLETE raised its earnings guidance for 2015 from \$3.00-\$3.20 a share to \$3.20-\$3.40 a share. We have raised our estimate by \$0.25 a share, to \$3.30. However...

Minnesota Power's taconite customers have lowered their production plans — and thus, their power needs. (Taconite is used in steelmaking.) These customers expect to need power for just 80% of capacity in September and 90% of capacity in the fourth quarter. This is the first time since the last recession that the taconite producers have been running well below 100%. This is why ALLETE raised its earnings target by just \$0.20 a share, despite a transaction that is expected to add more than that to the bottom line. The

utility will make up part of the demand shortfall by selling power on the wholesale market and trimming operating expenses, but these moves won't be enough to make up the difference.

We have trimmed our 2016 earnings estimate by a nickel a share. This is in response to the demand cutbacks by the taconite customers. More will be known at the start of December, when they announce their demand expectations for the first four months of 2016.

Minnesota Power has a major project that is on track for completion in May, and construction of another significant project is expected to begin later in 2016. The former is a \$260 million upgrade to a coal-fired unit. The latter is a \$345 million investment in a transmission line from northern Minnesota to the Canadian border. The utility benefits from current cost recovery for these kinds of capital spending.

ALLETE stock has a dividend yield that is a cut above average and 3- to 5-year total return potential that is just average, by utility standards.

Paul E. Debbas, CFA September 18, 2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC	18-20
Alliant Energy, formerly called Interstate Energy Corporation, was formed on April 21, 1998 through the merger of WPL Holdings, IES Industries, and Interstate Power. WPL stockholders received one share of Interstate Energy stock for each WPL share, IES stockholders received 1.14 Interstate Energy shares for each IES share, and Interstate Power stockholders received 1.11 Interstate Energy shares for each Interstate Power share.	28.02	28.93	31.15	33.33	31.02	30.81	33.02	27.88	29.54	30.20	30.65	31.25	Revenues per sh	34.80
	5.46	4.33	5.12	4.56	4.21	5.21	5.51	5.90	6.68	6.88	7.05	7.45	"Cash Flow" per sh	8.00
	2.21	2.06	2.69	2.54	1.89	2.75	2.75	3.05	3.29	3.48	3.60	3.85	Earnings per sh ^A	4.50
	1.05	1.15	1.27	1.40	1.50	1.58	1.70	1.80	1.88	2.04	2.20	2.36	Div'd Decl'd per sh ^{B +}	2.85
	4.51	3.42	4.91	7.96	10.87	7.82	6.07	10.43	6.63	7.56	8.85	9.00	Cap'l Spending per sh	9.80
	20.85	22.83	24.30	25.56	25.07	26.09	27.14	28.25	29.58	31.09	31.75	32.45	Book Value per sh ^C	34.65
	117.04	116.13	110.36	110.45	110.66	110.89	111.02	110.99	110.94	110.94	111.00	112.00	Common Shs Outs't'g ^D	115.00
	12.6	16.8	15.1	13.4	13.9	12.5	14.5	14.5	15.3	16.6	<i>Value figures are bold lines estimates</i>		Avg Ann'l P/E Ratio	14.5
	.67	.91	.80	.81	.93	.80	.91	.92	.86	.88			Relative P/E Ratio	.90
	3.8%	3.3%	3.1%	4.1%	5.7%	4.6%	4.3%	4.1%	3.7%	3.5%			Avg Ann'l Div'd Yield	4.2%

CAPITAL STRUCTURE as of 6/30/15	3279.6	3359.4	3437.6	3681.7	3432.8	3416.1	3665.3	3094.5	3276.8	3350.3	3400	3500	Revenues (\$mill)	4000
Total Debt \$3750.9 mill. Due in 5 Yrs \$1100.0 mill.	337.8	260.1	320.8	280.0	208.6	303.9	304.4	337.8	382.1	385.5	400	430	Net Profit (\$mill)	520
LT Debt \$3717.4 mill. LT Interest \$60.0 mill.	19.0%	43.8%	44.4%	33.4%	--	30.1%	19.0%	21.5%	12.4%	10.1%	15.0%	20.0%	Income Tax Rate	20.0%
(LT interest earned: 10.0x)	8.8%	8.3%	8.1%						8.7%	8.7%	5.0%	5.0%	Interest Expense (\$mill)	

			3.0%	3.1%	2.4%	--	--	--	--	--	8.8%	6.5%	7.0%	7.0%	AFUDC % to Net Profit	7.0%
Pension Assets-12/14	\$1022.9 mill.	Oblig.	41.6%	31.4%	32.4%	36.3%	44.3%	46.3%	45.7%	48.4%	46.1%	49.7%	47.5%	47.5%	Long-Term Debt Ratio	47.5%
\$1301.5 mill.			53.1%	62.9%	61.9%	58.6%	51.2%	49.5%	50.9%	48.4%	50.8%	47.5%	49.5%	49.5%	Common Equity Ratio	49.5%
Pfd Stock \$200.0 mill.	Pfd Div'd \$10.2 mill.		4599.1	4218.4	4329.5	4815.6	5423.0	5840.8	5921.2	6476.6	6461.0	7257.2	7500	7500	Total Capital (\$mill)	7800
8,000,000 shs.			4866.2	4044.0	4670.0	5353.5	6202.0	6720.6	7027.4	7828.0	7417.3	6444.0	8000	8000	Net Plant (\$mill)	9000

	4666.2	4944.9	4679.9	5353.5	6203.0	6730.0	7057.1	7858.0	7147.3	6442.0	8000	8000	net Plant (\$miln)	9000
	8.9%	7.5%	8.6%	7.0%	5.1%	6.6%	6.4%	6.3%	7.0%	6.3%	6.5%	6.5%	Return on Total Cap'l	6.5%
Common Stock 113,263,624 shs.	12.6%	9.0%	11.0%	9.1%	6.9%	9.7%	9.5%	10.1%	11.0%	10.6%	11.0%	11.0%	Return on Shr. Equity	11.0%

	13.1%	9.1%	11.3%	9.3%	6.8%	9.9%	9.5%	10.3%	11.3%	10.9%	11.5%	11.5%	Return on Com Equity ^E	11.5%
MARKET CAP: \$6.3 billion (Large Cap)	8.1%	4.0%	5.9%	3.8%	.9%	3.8%	3.3%	3.9%	4.9%	4.3%	4.5%	4.5%	Retained to Com Eq	5.0%
ELECTRIC OPERATING STATISTICS	42%	50%	50%	62%	88%	64%	67%	64%	57%	64%	61%	61%	All Div'ds to Net Prof	62%


ELECTRIC OPERATING STATISTICS				ALL DIVISIONS TO NET FUEL											
	2012	2013	2014	42%	35%	30%	02%	06%	04%	07%	04%	31%	01%	07%	01%
% Change Retail Sales (KWH)	-6.2	+7.	NA	BUSINESS: Alliant Energy Corp., formerly named Interstate Energy, is a holding company formed through the merger of WPL Holdings, IES Industries, and Interstate Power. Supplies electricity, gas, and other services in Wisconsin, Iowa, and Minnesota. Elect. revs. by state: WI, 44%; IA, 55%; MN, 1%. Elect. rev.: residential, 39%; commercial, 24%; industrial, 30%; wholesale, 6%; other, 1%. Fuel											
Avg. Util. Use (MWH) (kwh)	1157.1	1147.1	1182.1												
% Change Ind. Revs. per MWH (¢)	4.3	6.5	6.85												
Capacity at Peak (MW)	5886	5820	5426												
Peak Load, Summer (Mw)	5886	5820	5426												
Annual Load Factor (%)	NA	NA	NA												
% Change Customers (yr-end)	+3	+4	+4	sources, 2014: coal, 47%; nuclear, 17%; gas, 4%; other, 32%. Fuel costs: 50% of revs. 2014 depreciation rate: 5.5%. Estimated plant age: 12 years. Has 4,200 employees. Chairman & Chief Executive Officer: Patricia L. Kampling. Incorporated: Wisconsin. Address: 4902 N. Biltmore Lane, Madison, Wisconsin 53718. Telephone: 608-458-3311. Internet: www.alliantenergy.com .											

Fixed Charge Cov. (%)	332	295	320	The Environmental Protection	ating station is moving along nicely and
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ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '12-'14 to '18-'20
Revenues	5.0%	-1.5%	4.0%
"Cash Flow"	4.0%	7.0%	6.0%
Earnings	8.0%	6.5%	6.0%
Dividends	3.5%	6.5%	4.5%
Book Value	3.5%	3.5%	4.0%

Calendar	QUARTERLY REVENUES (\$ mill.)				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2012	765.7	690.3	887.6	750.9	3094.5
2013	859.6	718.0	866.6	832.6	3276.8
2014	952.8	750.3	843.1	804.1	3350.3
2015	897.4	717.2	1140	645.4	3400
2016	950	800	950	800	3500

Calendar	EARNINGS PER SHARE ^A				Full Year	comply with the new rules. The company has been shifting from coal-based plants, which have been singled out by the EPA as the largest carbon emitters, to natural gas and wind-based plants, considered to be much less harmful to the environment. Thus far, LNT has spent over \$1 billion on	will approve the plan by next year. We continue to look for higher earnings in 2015 and 2016. The company should benefit from rate increases and lower operating costs due to more-efficient facilities. Our 2015 and 2016 estimates stand at \$3.60 a share and \$3.85 a share.
	Mar.31	Jun.30	Sep.30	Dec.31			
2012	.50	.58	1.34	.63	3.05		
2013	.72	.59	1.43	.55	3.29		
2014	.97	.56	1.40	.55	3.48		
2015	.87	.60	1.55	.58	3.60		
2016	.90	.65	1.65	.55	3.85		

Calendar	QUARTERLY DIVIDENDS PAID ^B 				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2011	.425	.425	.425	.425	1.70
2012	.45	.45	.45	.45	1.80
2013	.47	.47	.47	.47	1.88
2014	.51	.51	.51	.51	2.04
2015	.55	.55	.55		

<p>(A) Diluted EPS. Excl. nonrecur. gains (losses): '05, \$(1.05); '06, 83¢; '07, \$1.09; '08, 7¢; '09, (88¢); '10, (15¢); '11, (1¢), (12, (16¢). Next ex. rpt. due early November. (B) Div's historically</p>	<p>paid in mid-Feb., May, Aug., and Nov. ■ Div'd reinvest. plan avail. † Shareholder invest. plan avail.</p>	<p>\$0.77/sh. (D) In mill. (E) Rate base: Orig. cost. Rates all'd on reg. eq. in IA in '14: 10.9%; in WI in '14 Regul. Clim.: WI, Above Avg.; IA, Avg.</p>	<p>Company's Financial Strength Stock's Price Stability Price Growth Persistence Earnings Predictability</p>	<p>A 100 90 75</p>
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<p>To subscribe call 1-800-VALUELINE</p>				

CON. EDISON NYSE-ED				RECENT PRICE	62.67	P/E RATIO	16.3 (Trailing: 16.6 Median: 15.0)	RELATIVE P/E RATIO	0.92	DIV'D YLD	4.3%	VALUE LINE															
TIMELINESS	3	Raised 10/30/15	High: 45.6	49.3	49.3	52.9	49.3	46.3	51.0	62.7	66.0	64.0	68.9	72.3				Target Price Range	2018	2019	2020						
SAFETY	1	New 7/27/90	Low: 37.2	41.1	41.2	43.1	34.1	32.6	41.5	48.6	53.6	54.2	52.2	56.9													
TECHNICAL	1	Raised 11/20/15	LEGENDS 0.68 x Dividends p sh divided by Interest Rate Relative Price Strength Options: Yes Shaded area indicates recession																								
BETA	.60	(1.00 = Market)																									
2018-20 PROJECTIONS																											
Price	70	Gain (+10%)	75	Gain (-10%)	70	Ann'l Total Return	7%																				
High	70	Low	55																								
Insider Decisions																											
to Buy	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0										
Options	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
to Sell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
Institutional Decisions																											
to Buy	402014	102015	202015																								
to Sell	321	330	299																								
Hld's(000)	152674	153088	154997																								
Percent shares traded	21	14	7																								
1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC 18-20									
35.04	44.48	45.41	39.65	43.51	40.24	47.66	47.14	48.23	49.62	46.36	45.69	44.17	41.62	42.27	44.11	43.35	44.35	Revenues per sh	48.50								
5.74	5.51	5.70	5.44	5.12	4.54	5.27	5.28	5.77	5.99	5.86	6.24	6.61	7.15	7.45	7.30	7.85	8.20	"Cash Flow" per sh	9.25								
3.13	2.74	3.21	3.13	2.83	2.32	2.99	2.95	3.48	3.36	3.14	3.47	3.57	3.86	3.93	3.62	3.95	4.10	Earnings per sh ^A	4.50								
2.14	2.18	2.20	2.22	2.24	2.26	2.28	2.30	2.32	2.34	2.36	2.38	2.40	2.42	2.46	2.52	2.60	2.68	Div'd Decl'd per sh ^B	2.90								
3.17	4.52	5.20	5.68	5.72	5.60	6.59	7.17	7.09	8.50	7.80	6.96	6.72	7.06	8.67	8.26	11.50	13.05	Cap'l Spending per sh	10.50								
25.31	25.81	26.71	27.68	28.44	29.09	29.80	31.09	32.58	35.43	36.46	37.93	39.05	40.53	41.81	42.94	44.30	45.75	Book Value per sh ^C	50.50								
213.81	212.03	212.15	213.93	225.84	242.51	245.29	257.46	272.02	273.72	281.12	291.62	292.89	292.87	292.87	292.88	293.00	293.00	Common Shs Outst'g ^D	293.00								
14.0	12.0	12.0	13.3	14.3	18.2	15.1	15.5	13.8	12.3	12.5	13.3	15.1	15.4	14.7	15.9	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	14.0								
.80	.78	.61	.73	.82	.96	.80	.84	.73	.74	.83	.85	.95	.98	.83	.84			Relative P/E Ratio	.90								
4.9%	6.6%	5.7%	5.3%	5.5%	5.3%	5.0%	5.0%	4.8%	5.7%	6.0%	5.2%	4.5%	4.1%	4.3%	4.4%			Avg Ann'l Div'd Yield	4.6%								
CAPITAL STRUCTURE as of 9/30/15																											
Total Debt \$13442 mill. Due in 5 Yrs \$3531 mill.										11690	12137	13120	13583	13032	13325	12938	12188	12381	12919	12700	13000	Revenues (\$mill)	14200				
LT Debt \$11521 mill. LT Interest \$553 mill.										719.0	749.0	936.0	933.0	868.0	992.0	1062.0	1141.0	1157.0	1066.0	1170	1215	Net Profit (\$mill)	1330				
(LT interest earned: 3.5x)										33.6%	35.2%	32.6%	36.0%	34.2%	36.0%	36.1%	34.5%	31.8%	34.0%	35.0%	34.0%	Income Tax Rate	34.0%				
Leases, Uncapitalized Annual rentals \$18 mill.										2.2%	1.6%	1.9%	1.7%	2.6%	2.4%	1.6%	.5%	.5%	.3%	1.0%	Nil	AFUDC % to Net Profit	Nil				
Pension Assets-12/14 \$11495 mill.										49.6%	50.2%	45.6%	48.3%	48.5%	48.6%	46.5%	45.9%	46.1%	48.0%	48.5%	49.5%	Long-Term Debt Ratio	48.5%				
Oblig. \$15081 mill.										49.0%	48.5%	53.1%	50.6%	50.4%	50.4%	52.5%	54.1%	53.9%	52.0%	51.5%	50.5%	Common Equity Ratio	51.5%				
Pfd Stock None										14921	16515	16687	19160	20330	21952	21794	21933	22735	24207	25125	26525	Total Capital (\$mill)	28700				
Common Stock 293,192,258 shs.										17112	18445	19914	20874	22464	23863	25093	26939	28436	29827	32075	34700	Net Plant (\$mill)	40100				
as of 10/30/15										6.3%	6.0%	7.0%	6.2%	5.7%	5.9%	6.2%	6.5%	6.4%	5.6%	6.0%	5.5%	Return on Total Cap'l	6.0%				
MARKET CAP: \$18 billion (Large Cap)										9.6%	9.1%	10.3%	9.4%	8.3%	8.8%	9.1%	9.6%	9.4%	8.5%	9.0%	9.0%	Return on Shr. Equity	9.0%				
ELECTRIC OPERATING STATISTICS										9.7%	9.2%	10.4%	9.5%	8.4%	8.9%	9.2%	9.6%	9.4%	8.5%	9.0%	9.0%	Return on Com Equity ^E	9.0%				
2012 2013 2014										2.6%	2.6%	3.9%	3.1%	2.5%	3.2%	3.1%	3.6%	3.6%	2.6%	3.0%	3.0%	Retained to Com Eq	3.0%				
% Change Retail Sales (KWH)										74%	73%	63%	67%	71%	65%	66%	62%	62%	69%	65%	65%	All Div'ds to Net Prof	64%				
Avg. Indust. Use (MWH)										BUSINESS: Consolidated Edison, Inc. is a holding company for Consolidated Edison Company of New York, Inc. (CECONY), which sells electricity, gas, and steam in most of New York City and Westchester County. Also owns Orange and Rockland Utilities (O&R, acquired 7/99), which operates in New York, New Jersey, and Pennsylvania. Has 3.6 million electric, 1.2 million gas customers. Pursues competitive energy opportunities through three wholly owned subsidiaries. Purchases most of its power. Fuel costs: 35% of revenues. '14 reported depreciation rates: 2.9%-3.1%. Has 14,600 employees. Chairman, President & CEO: John McAvoy. Inc.: New York. Address: 4 Irving Place, New York, New York 10003. Tel.: 212-460-4600. Internet: www.conedison.com.																	
Avg. Indust. Revs. per KWH (¢)																											
Capacity at Peak (Mw)																											
Peak Load, Summer (Mw)																											
Annual Load Factor (%)																											
% Change Customers (yr-end)																											
Fixed Charge Cov. (%)																											
ANNUAL RATES																											
Past 10 Yrs.																											
Past 5 Yrs.																											
Est'd '12-'14																											
Revenues																											
"Cash Flow"																											
Earnings																											
Dividends																											
Book Value																											
Cal-endar	QUARTERLY REVENUES (\$ mill.)				Full Year																						
	Mar.31	Jun.30	Sep.30	Dec.31																							
2012	3078	2771	3438	2901	12188																						
2013	3306	2767	3440	2868	12381																						
2014	3789	2911	3390	2829	12919																						
2015	3616	2788	3443	2853	12700																						
2016	3650	2850	3500	3000	13000																						
Cal-endar	EARNINGS PER SHARE ^A				Full Year																						
	Mar.31	Jun.30	Sep.30	Dec.31																							
2012	.94	.73	1.49	.70	3.86																						
2013	1.16	.49	1.49	.79	3.93																						
2014	1.23	.63	1.49	.28	3.62																						
2015	1.26	.75	1.46	.48	3.95																						
2016	1.20	.70	1.55	.65	4.10																						
Cal-endar	QUARTERLY DIVIDENDS PAID ^B				Full Year																						
	Mar.31	Jun.30	Sep.30	Dec.31																							
2011	.60	.60	.60	.60	2.40																						
2012	.605	.605	.605	.605	2.42																						
2013	.615	.615	.615	.615	2.46																						
2014	.63	.63	.63	.63	2.52																						
2015	.65	.65	.65																								

DOMINION RES. NYSE-D					RECENT PRICE	67.80	P/E RATIO	18.9	(Trailing: 22.1; Median: 18.0)	RELATIVE P/E RATIO	1.06	DIV'D YLD	4.1%	VALUE LINE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
TIMELINESS	2	Raised 10/30/15	High: 34.4	43.5	42.2	49.4	48.5	39.8	45.1	53.6	55.6	68.0	80.9	79.9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			</

EVERSOURCE ENERGY NYSE-ES					RECENT PRICE	50.37	P/E RATIO	17.7 (Trailing: 17.5 Median: 17.0)	RELATIVE P/E RATIO	0.99	DIV'D YLD	3.5%	VALUE LINE								
TIMELINESS	3	Lowered 8/14/15	High: 20.3	22.0	28.9	33.6	31.6	26.5	32.2	36.5	40.9	45.7	56.7	56.8							
SAFETY	1	Raised 5/22/15	Low: 17.2	17.3	19.1	26.2	17.2	19.0	24.7	30.0	33.5	38.6	41.3	44.6							
TECHNICAL	1	Raised 11/20/15	LEGENDS 0.95 x Dividends p sh divided by Interest Rate Relative Price Strength Options: Yes Shaded area indicates recession																		
BETA	.75	(1.00 = Market)																			
2018-20 PROJECTIONS																					
Price	60	Gain (+20%)	Ann'l Total Return																		
High	60		8%																		
Low	45		2%																		
Insider Decisions																					
D	J	F	M	A	M	J	J	A													
to Buy	0	0	0	0	0	0	0	0													
Options	0	0	0	0	0	0	0	0													
to Sell	0	0	0	2	0	1	2	0													
Institutional Decisions																					
4Q2014	1Q2015	2Q2015																			
to Buy	233	203	236																		
to Sell	211	255	206																		
Hld's(000)	223425	223824	226206																		
Percent shares traded																					
30																					
20																					
10																					
120																					
100																					
80																					
64																					
48																					
32																					
24																					
20																					
16																					
12																					
8																					
% TOT. RETURN 10/15																					
THIS STOCK																					
VL ARITH. INDEX																					
1 yr. 6.7 -1.3																					
3 yr. 43.8 49.3																					
5 yr. 93.1 73.5																					
© VALUE LINE PUB. LLC															18-20						
1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Revenues per sh			28.00
33.91	40.86	52.82	40.89	47.53	51.82	41.85	44.64	37.27	37.22	30.97	27.76	25.21	19.98	23.16	24.42	25.80	26.00	"Cash Flow" per sh			6.75
5.68	3.39	10.48	6.32	5.80	5.00	5.46	3.69	4.82	6.16	4.96	5.68	4.88	4.03	5.22	4.56	5.55	5.55	Earnings per sh A			3.75
d1.14	d.20	1.37	1.08	1.24	.91	.98	.82	1.59	1.86	1.91	2.10	2.22	1.89	2.49	2.58	2.80	3.00	Div'd Decl'd per sh B			2.10
.10	.40	.45	.53	.58	.63	.68	.73	.78	.83	.95	1.03	1.10	1.32	1.47	1.57	1.67	1.78	Cap'l Spending per sh			6.25
2.50	2.88	3.40	3.86	4.31	4.85	5.89	5.49	7.14	8.06	5.17	5.41	6.08	4.69	4.62	5.06	5.80	6.65	Book Value per sh C			38.00
15.80	15.43	16.27	17.33	17.73	17.80	18.46	18.14	18.65	19.38	20.37	21.60	22.65	29.41	30.49	31.47	32.55	33.75	Common Shs Outst'g D			322.00
131.87	143.82	130.13	127.56	127.70	129.03	131.59	154.23	156.22	155.83	175.62	176.45	177.16	314.05	315.27	316.98	318.00	319.00	Avg Ann'l P/E Ratio			14.0
--	--	14.1	16.1	13.4	20.8	19.8	27.1	18.7	13.7	12.0	13.4	15.4	19.9	16.9	17.9	Relative P/E Ratio			.90		
--	--	.72	.88	.76	1.0	1.05	1.46	.99	.82	.80	.85	.97	1.27	.95	.95	Avg Ann'l Div'd Yield			4.0%		
.6%	1.9%	2.3%	3.0%	3.5%	3.3%	3.5%	3.3%	2.6%	3.2%	4.2%	3.6%	3.2%	3.5%	3.5%	3.4%	Bold figures are Value Line estimates					
CAPITAL STRUCTURE as of 6/30/15																					
Total Debt \$9922.2 mill. Due in 5 Yrs \$3763.9 mill.																					
LT Debt \$8689.6 mill. LT Interest \$376.3 mill.																					
(LT interest earned: 4.7x)																					
Leases, Uncapitalized Annual rentals \$20.1 mill.																					
Pension Assets-12/14 \$4126.5 mill.																					
Oblig. \$5486.2 mill.																					
Pfd Stock \$155.6 mill. Pfd Div'd \$7.6 mill.																					
Incl. 2,324,000 shs \$1.90-\$3.28 rates (\$50 par) not subject to mandatory redemption.																					
Common Stock 317,173,164 shs. as of 7/31/15																					
MARKET CAP: \$16 billion (Large Cap)																					
ELECTRIC OPERATING STATISTICS																					
2012 2013 2014																					
% Change Retail Sales (KWH)																					
+47.0 +1.0 -1.6																					
Avg. Indust. Use (MWH)																					
NA NA NA																					
Avg. Indust. Revs. per KWH (¢)																					
NA NA NA																					
Capacity at Peak (MW)																					
NA NA NA																					
Peak Load, Winter (MW)																					
NA NA NA																					
Annual Load Factor (%)																					
NA NA NA																					
% Change Customers (yr-end)																					
+59.8 NA NA																					
Fixed Charge Cov. (%)																					
320 427 426																					
ANNUAL RATES																					
Past Past Est'd '12-'14																					
10 Yrs. 5 Yrs. to '18-'20																					
Revenues																					
-7.0% -8.5% 3.5%																					
"Cash Flow"																					
-2.0% -3.0% 6.5%																					
Earnings																					
8.0% 5.5% 8.5%																					
Dividends																					
9.5% 11.5% 6.5%																					
Book Value																					
5.5% 9.5% 4.0%																					
Cal-endar	QUARTERLY REVENUES (\$ mill.)				Full Year																
	Mar.31	Jun.30	Sep.30	Dec.31																	
2012	1099	1628	1861	1684	6273.8																
2013	1995	1635	1892	1777	7301.2																
2014	2290	1677	1892	1881	7741.9																
2015	2513	1817	1933	1937	8200																
2016	2500	1850	2000	1950	8300																
Cal-endar	EARNINGS PER SHARE A				Full Year																
	Mar.31	Jun.30	Sep.30	Dec.31																	
2012	.56	.15	.66	.55	1.89																
2013	.72	.54	.66	.56	2.49																
2014	.74	.40	.74	.69	2.58																
2015	.80	.65	.74	.61	2.80																
2016	.85	.65	.80	.70	3.00																
Cal-endar	QUARTERLY DIVIDENDS PAID B				Full Year																
	Mar.31	Jun.30	Sep.30	Dec.31																	
2011	.275	.275	.275	.275	1.10																
2012	.294	.343	.343	.343	1.32																
2013	.3675	.3675	.3675	.3675	1.47																
2014	.3925	.3925	.3925	.3925	1.57																
2015	.4175	.4175	.4175																		
BUSINESS: Eversource Energy (formerly Northeast Utilities) is the parent of utilities that have 3.1 million electric, 504,000 gas customers. Supplies power to most of Connecticut and gas to part of Connecticut; supplies power to three fourths of New Hampshire's population; supplies power to western Massachusetts and parts of eastern Massachusetts & gas to central & eastern Massachusetts.																					
Eversource Energy was granted a gas rate increase in Massachusetts. The regulators raised rates by \$15.8 million, based on a 9.8% return on a 52.1% common-equity ratio. New tariffs will take effect at the start of 2016.																					
Rate relief is one reason why earnings are likely to advance significantly this year and next. Eversource is also benefiting from an electric rate hike in Connecticut that took effect in late 2014. Another factor is customer conversions from oil heat to gas heat. The company is reducing expenses, too. Even so, we have lowered our 2015 earnings estimate by \$0.10 a share because the tax rate will be higher than we had expected. Our revised profit estimate is at the low end of Eversource's guidance of \$2.80-\$2.85 a share.																					
Eversource is proposing to sell its generating assets in New Hampshire. These assets have a book value of \$650 million and are earning \$0.09-\$0.10 a share annually. If approved, the utility would recover its stranded costs by issuing securitized bonds. A decision is expected by yearend.																					
The company is proposing a grid modernization plan in Massachusetts. Eversource would spend \$430 million through 2021. The utility would recover its costs through a tracking mechanism, rather than by filing general rate cases. A ruling from the regulators is expected in 2016.																					
Eversource is seeking permission to build a transmission line to Canada. When the project was proposed several years ago, it was expected to cost under \$1 billion, but the latest estimate is \$1.6 billion because of inflation, plus the route has changed and some of the line will be built underground. The goal is for the line to go into service in the first half of 2019.																					
We expect a dividend increase in the first quarter of 2016. We think the board of directors will raise the annual disbursement by \$0.11 a share (6.6%).																					
Eversource's strong points are reflected in the share price. Although prospects for earnings and dividend growth are solid, the stock's 3- to 5-year total return potential is low. Meanwhile, the dividend yield is a bit below the industry mean.																					
Paul E. Debbas, CFA November 20, 2015																					

IDACORP, INC. NYSE-IDA						RECENT PRICE	69.00	P/E RATIO	17.3 (Trailing: 16.4 Median: 14.0)	RELATIVE P/E RATIO	0.96	DIV'D YLD	3.0%	VALUE LINE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
TIMELINESS	3	Lowered 5/15/15	High: 32.9	32.1	40.2	39.2	35.1	32.8	37.8	42.7	45.7	54.7	70.1	70.5		Target Price Range	2018	2019	2020																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
SAFETY	2	Raised 8/2/13	Low: 25.3	26.2	29.0	30.1	21.9	20.9	30.0	33.9	38.2	43.1	50.2	55.4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
TECHNICAL	3	Raised 10/23/15	LEGENDS 1.00 x Dividends p sh divided by Interest Rate Relative Price Strength Options: Yes Shaded area indicates recession																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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Price	80	Gain (+15%)	Ann'l Total Return	Percent shares traded	15	10	5	1999	2000	2001	2002	2003	2004	2005						2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC	18-20																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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to Buy	0	0	1	2	0	0	1	0	0	0	0	0	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0</

NORTHWESTERN NYSE-NWE				RECENT PRICE	56.86	P/E RATIO	18.3	(Trailing: 20.1 Median: 16.0)	RELATIVE P/E RATIO	1.02	DIV'D YLD	3.5%	VALUE LINE						
TIMELINESS	2	Raised 10/30/15	High: 28.2	32.5	35.8	36.7	29.7	26.8	30.6	36.6	38.0	47.2	58.7	59.7	Target Price Range 2018 2019 2020				
SAFETY	3	New 5/4/12	Low: 24.8	25.5	30.1	24.5	16.5	18.5	23.8	27.4	33.0	35.1	42.6	48.4					
TECHNICAL	3	Raised 10/23/15	LEGENDS 0.77 x Dividends p sh divided by Interest Rate Relative Price Strength Options: Yes Shaded area indicates recession																
BETA	.70	(1.00 = Market)													% TOT. RETURN 9/15 THIS STOCK VL ARITH. INDEX 1 yr. 23.0 -4.0 3 yr. 65.7 37.9 5 yr. 130.0 68.4				
2018-20 PROJECTIONS																			
Price	65	Gain (+15%)																	
High	40	(-30%)																	
Insider Decisions																			
D	J	F	M	A	M	J	J	A											
to Buy	1	2	0	0	0	0	0	0											
Options	0	0	0	0	0	0	0	0											
to Sell	0	0	0	2	0	2	0	0											
Institutional Decisions																			
4Q2014	1Q2015	2Q2015																	
to Buy	117	97	88																
to Sell	77	93	96																
Hld's(000)	46223	46240	49417																
Percent shares traded	30	20	10																
1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC	18-20
--	--	--	--	--	29.18	32.57	31.49	30.79	35.09	31.72	30.66	30.80	28.76	29.80	25.68	24.85	26.80	Revenues per sh	30.00
--	--	--	--	--	3.20	4.00	3.62	3.70	4.40	4.62	4.76	5.42	5.18	5.45	5.39	6.00	6.50	"Cash Flow" per sh	7.50
--	--	--	--	--	d14.32	1.71	1.31	1.44	1.77	2.02	2.14	2.53	2.26	2.46	2.99	3.00	3.25	Earnings per sh ^A	3.75
--	--	--	--	--	--	1.00	1.24	1.28	1.32	1.34	1.36	1.44	1.48	1.52	1.60	1.92	2.00	Div'd Decl'd per sh ^B = ^C	2.25
--	--	--	--	--	2.25	2.26	2.81	3.00	3.47	5.26	6.30	5.20	5.89	5.95	5.76	6.35	6.30	Cap'l Spending per sh	5.50
--	--	--	--	--	19.92	20.60	20.65	21.12	21.25	21.86	22.64	23.68	25.09	26.60	31.50	33.20	34.30	Book Value per sh ^C	38.25
--	--	--	--	--	35.60	35.79	35.97	38.97	35.93	36.00	36.23	36.28	37.22	38.75	46.91	48.25	48.50	Common Shs Outst'g ^D	49.25
--	--	--	--	--	--	17.1	26.0	21.7	13.9	11.5	12.9	12.6	15.7	16.9	16.2	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	14.0
--	--	--	--	--	--	.91	1.40	1.15	.84	.77	.82	.79	1.00	.95	.85			Relative P/E Ratio	.90
--	--	--	--	--	--	3.4%	3.6%	4.1%	5.4%	5.7%	4.9%	4.5%	4.2%	3.7%	3.3%			Avg Ann'l Div'd Yield	4.3%
CAPITAL STRUCTURE as of 6/30/15						1165.8	1132.7	1200.1	1260.8	1141.9	1110.7	1117.3	1070.3	1154.5	1204.9	1200	1300	Revenues (\$mill)	1475
Total Debt \$1961.1 mill. Due in 5 Yrs \$684.9 mill.						61.5	49.2	53.2	67.6	73.4	77.4	92.6	83.7	94.0	120.7	145	160	Net Profit (\$mill)	185
LT Debt \$1739.4 mill. LT Interest \$80.0 mill.						38.5%	40.3%	37.8%	37.3%	17.2%	25.0%	9.8%	9.6%	13.2%	13.2%	18.0%	19.0%	Income Tax Rate	22.0%
Incl. \$27.7 mill. capitalized leases.						2.1%	3.3%	2.5%	2.3%	7.2%	22.7%	5.4%	15.2%	14.1%	14.4%	11.0%	10.0%	AFUDC % to Net Profit	5.0%
(LT interest earned: 2.4x)						44.3%	49.9%	50.1%	46.8%	56.4%	57.2%	52.2%	53.8%	53.5%	53.4%	53.0%	54.0%	Long-Term Debt Ratio	51.0%
Leases, Uncapitalized Annual rentals \$2.0 mill.						55.7%	50.1%	49.9%	53.2%	43.6%	42.8%	47.8%	46.2%	46.5%	46.6%	47.0%	46.0%	Common Equity Ratio	49.0%
Pension Assets-12/14 \$556.1 mill.						1324.0	1482.2	1648.4	1434.3	1803.9	1916.4	1797.1	2020.7	2215.7	3168.0	3425	3640	Total Capital (\$mill)	3850
Oblig. \$688.4 mill.						1409.2	1491.9	1770.9	1839.7	1964.1	2118.0	2213.3	2435.6	2690.1	3758.0	4060	4210	Net Plant (\$mill)	4525
Pfd Stock None						7.0%	5.2%	5.0%	7.0%	6.0%	6.0%	7.1%	5.5%	5.5%	4.8%	5.5%	5.5%	Return on Total Cap'l	6.0%
Common Stock 47,063,574 shs.						8.3%	6.6%	6.5%	8.9%	9.3%	9.4%	10.8%	9.0%	9.1%	8.2%	9.0%	9.5%	Return on Shr. Equity	10.0%
as of 7/17/15						8.3%	6.6%	6.5%	8.9%	9.3%	9.4%	10.8%	9.0%	9.1%	8.2%	9.0%	9.5%	Return on Com Equity ^E	10.0%
MARKET CAP: \$2.7 billion (Mid Cap)						3.5%	.7%	.7%	2.3%	3.2%	3.5%	4.7%	3.2%	3.5%	3.8%	3.0%	4.0%	Retained to Com Eq	4.0%
ELECTRIC OPERATING STATISTICS						58%	90%	89%	74%	66%	63%	56%	65%	61%	54%	64%	61%	All Div'ds to Net Prof	59%
						2012	2013	2014											
% Change Retail Sales (KWH)						+3	+1.3	+7											
Avg. Indust. Use (MWH)						NMF	29162	28987											
Avg. Indust. Revs. per KWH (¢)						NA	NA	NA											
Capacity at Peak (MW)						NA	NA	NA											
Peak Load, Winter (MW)						2108	2056	2044											
Annual Load Factor (%)						NA	NA	NA											
% Change Customers (yr-end)						+8	+7	+1.0											
Fixed Charge Cov. (%)						210	217	201											
ANNUAL RATES						Past 10 Yrs.	Past 5 Yrs.	Est'd '12-'14											
of change (per sh)						-5%	-3.0%	1.0%											
Revenues						5.5%	4.5%	6.0%											
"Cash Flow"						--	8.0%	6.5%											
Earnings						--	3.0%	6.5%											
Dividends						--	3.0%	6.5%											
Book Value						3.5%	5.5%	5.5%											
Cal-endar	QUARTERLY REVENUES (\$ mill.)				Full Year														
	Mar.31	Jun.30	Sep.30	Dec.31															
2012	309.1	244.6	235.8	280.8	1070.3														
2013	313.0	260.2	262.2	319.1	1154.5														
2014	369.7	270.3	251.9	313.0	1204.9														
2015	346.0	270.6	272.7	310.7	1200														
2016	375	295	285	345	1300														
Cal-endar	EARNINGS PER SHARE ^A				Full Year														
	Mar.31	Jun.30	Sep.30	Dec.31															
2012	.88	.31	.30	.78	2.26														
2013	1.01	.37	.40	.68	2.46														
2014	1.17	.20	.77	.85	2.99														
2015	1.09	.38	.51	1.02	3.00														
2016	1.20	.40	.60	1.05	3.25														
Cal-endar	QUARTERLY DIVIDENDS PAID ^B = ^C				Full Year														
	Mar.31	Jun.30	Sep.30	Dec.31															
2011	.36	.36	.36	.36	1.44														
2012	.37	.37	.37	.37	1.48														
2013	.38	.38	.38	.38	1.52														
2014	.40	.40	.40	.40	1.60														
2015	.48	.48	.48	.48															

BUSINESS: NorthWestern Corporation (doing business as NorthWestern Energy) supplies electricity & gas in the Upper Midwest and Northwest, serving 416,000 electric customers in Montana and South Dakota and 277,000 gas customers in Montana (83% of gross margin), South Dakota (15%), and Nebraska (2%). Electric revenue breakdown: residential, 40%; commercial, 51%; industrial, 5%; other, 4%. Generating sources are not provided by company. Fuel costs: 40% of revenues. '14 reported depreciation rate: 2.9%. Has 1,600 employees. Chairman: Dr. E. Linn Draper Jr. President & CEO: Robert C. Rowe. Incorporated: Delaware. Address: 3010 West 69th Street, Sioux Falls, South Dakota 57108. Telephone: 605-978-2900. Internet: www.northwesternenergy.com.

NorthWestern has reached a settlement of its electric rate case in South Dakota. The agreement was signed with the staff of the state commission, but some industrial customers oppose it. NorthWestern had filed for a rate hike of \$26.5 million, but settled for an increase of \$20.2 million. The utility would receive an additional \$9.0 million to place an acquired asset (see below) in the rate base. This is a "black box" agreement in which no allowed return on equity or common-equity ratio is specified. A ruling from the South Dakota regulators is expected by yearend.

The utility bought a wind project. It paid \$143 million for an 80-megawatt facility in South Dakota. NorthWestern had been buying the output of this project through a purchased-power agreement. The company will finance the purchase with slightly more debt than equity.

The Montana commission has eliminated a regulatory mechanism. This mechanism, designed to compensate NorthWestern for revenue losses stemming from conservation programs, was producing \$7.1 million annually. The change won't have much effect on profits

in 2015, but will reduce 2016 earnings by \$0.09 a share.

We estimate that earnings will be about flat in 2015. NorthWestern is benefiting from a \$117 million rate increase in Montana it received in late 2014 when the utility purchased some hydro assets. However, third-quarter income in 2014 included a \$0.43-a-share tax benefit, thereby making that period's comparison tough. In addition, unfavorable weather conditions lowered the bottom line by \$0.11 a share in the first nine months of 2015.

We have trimmed our 2016 profit forecast by \$0.05 a share. The effect of the cancellation of the aforementioned conservation revenue mechanism should be offset partly by our expectation that interest expense will be lower than we previously expected. Earnings should still rise significantly thanks to rate relief, and we assume a return to normal weather patterns.

This timely stock has a dividend yield that's about average for a utility. With the recent price near the midpoint of our 2018-2020 Target Price Range, total return potential over that time frame is low.

Paul E. Debbas, CFA *October 30, 2015*

OTTER TAIL CORP. NDQ-OTTR						RECENT PRICE	25.83	P/E RATIO	15.4	17.9	23.0	RELATIVE P/E RATIO	0.88	DIV'D YLD	4.8%	VALUE LINE						
TIMELINESS	4	Lowered 5/15/15	High: 27.5	32.0	31.9	39.4	46.2	25.4	25.4	23.5	25.3	31.9	32.7	33.4			Target Price Range					
SAFETY	3	Lowered 12/24/10	Low: 23.8	24.0	25.8	29.0	15.0	15.5	18.2	17.5	20.7	25.2	26.5	24.8			2018 2019 2020					
TECHNICAL	3	Raised 9/11/15	LEGENDS 1.00 x Dividends p sh divided by Interest Rate Relative Price Strength Options: Yes Shaded area indicates recession																			
BETA	.85	(1.00 = Market)																				
2018-20 PROJECTIONS																						
Price	50	Gain (+95%)	Ann'l Total Return																			
High	50	30	21%																			
Low	30	8%	8%																			
Insider Decisions																						
O	N	D	J	F	M	A	M	J														
to Buy	0	0	0	0	0	0	0	0														
Options	0	0	0	0	0	0	0	0														
to Sell	0	1	1	0	0	0	0	0														
Institutional Decisions																						
4Q2014	10Q2015	2Q2015	Percent shares traded																			
to Buy	64	50	49																			
to Sell	41	58	53																			
Hld's(000)	12708	12560	12614																			
1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC	18-20			
19.48	23.45	26.53	27.75	29.28	30.45	35.59	37.43	41.50	37.06	29.03	31.08	29.86	23.76	24.63	21.48	21.20	22.05	Revenues per sh	29.15			
2.91	3.21	3.40	3.44	3.30	2.88	3.35	3.39	3.55	2.81	2.76	2.60	2.36	2.71	3.02	3.09	3.15	3.60	"Cash Flow" per sh	4.50			
1.45	1.60	1.68	1.79	1.51	1.50	1.78	1.69	1.78	1.09	.71	.38	.45	1.05	1.37	1.55	1.60	1.75	Earnings per sh ^A	2.25			
.99	1.02	1.04	1.06	1.08	1.10	1.12	1.15	1.17	1.19	1.19	1.19	1.19	1.19	1.19	1.21	1.23	1.25	Div'd Decl'd per sh ^B	1.32			
1.37	1.85	2.17	2.95	1.97	1.72	2.04	2.35	5.43	7.51	4.95	2.38	2.04	3.20	4.53	4.40	4.20	4.35	Cap'l Spending per sh	4.75			
10.30	10.87	11.33	12.25	12.98	14.81	15.80	16.67	17.55	19.14	18.78	17.57	15.83	14.43	14.75	15.39	16.05	16.65	Book Value per sh ^C	18.10			
23.85	23.85	24.65	25.59	25.72	28.98	29.40	29.52	29.85	35.38	35.81	36.00	36.10	36.17	36.27	37.22	38.00	39.00	Common Shs Outst'g ^D	42.00			
13.9	13.5	16.4	16.0	17.8	17.3	15.4	17.3	19.0	30.1	31.2	55.1	47.5	21.7	21.1	18.8	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	18.0			
.79	.88	.84	.87	1.01	.91	.82	.93	1.01	1.81	2.08	3.51	2.98	1.38	1.19	.99			Relative P/E Ratio	1.15			
4.9%	4.7%	3.8%	3.7%	4.0%	4.2%	4.1%	3.9%	3.5%	3.6%	5.4%	5.7%	5.6%	5.2%	4.1%	4.1%			Avg Ann'l Div'd Yield	3.3%			
CAPITAL STRUCTURE as of 6/30/15						1046.4	1105.0	1238.9	1311.2	1039.5	1119.1	1077.9	859.2	893.3	799.3	805	860	Revenues (\$mill)	1225			
Total Debt \$541.6 mill. Due in 5 Yrs \$87.0 mill.						52.9	50.8	54.0	35.1	26.0	13.6	16.4	39.0	50.2	56.9	60.0	70.0	Net Profit (\$mill)	95.0			
LT Debt \$498.4 mill. LT Interest \$28.0 mill.						34.6%	34.8%	34.1%	30.0%	--	--	14.5%	5.2%	21.3%	22.5%	25.0%	25.0%	Income Tax Rate	25.0%			
(LT interest earned: 3.5x)						1.7%	1.9%	4.2%	6.1%	4.0%	.6%	3.8%	1.7%	1.7%	3.6%	3.0%	4.0%	AFUDC % to Net Profit	5.0%			
Leases, Uncapitalized Annual rentals \$7 mill.						35.0%	33.5%	38.9%	32.9%	38.8%	40.2%	44.6%	44.0%	42.1%	46.5%	46.5%	46.5%	Long-Term Debt Ratio	48.0%			
Pension Assets-12/14 \$244.6 mill. Oblig. \$311.7 mill.						62.9%	64.5%	59.4%	65.6%	59.8%	58.4%	54.0%	54.4%	57.9%	53.5%	53.5%	53.5%	Common Equity Ratio	52.0%			
Pfd Stock None						738.2	763.0	882.1	1032.5	1124.4	1083.3	1058.9	959.2	924.4	1071.3	1135	1210	Total Capital (\$mill)	1460			
Common Stock 37,591,785 shs. as of 7/31/15						697.1	718.6	854.0	1037.6	1098.6	1108.7	1077.5	1049.5	1167.0	1268.5	1350	1450	Net Plant (\$mill)	1750			
MARKET CAP: \$975 million (Small Cap)						8.3%	7.7%	7.2%	4.3%	3.4%	2.7%	3.2%	5.7%	6.7%	6.7%	6.5%	7.0%	Return on Total Cap'l	7.5%			
ELECTRIC OPERATING STATISTICS						11.0%	10.0%	10.0%	5.1%	3.8%	2.1%	2.8%	7.3%	9.4%	9.9%	10.0%	11.0%	Return on Shr. Equity ^E	12.5%			
2012 2013 2014						11.2%	10.2%	10.2%	5.1%	3.8%	2.0%	2.7%	7.3%	9.3%	9.9%	10.0%	11.0%	Return on Com Equity	12.5%			
% Change Retail Sales (KWH)						4.2%	3.3%	3.5%	NMF	NMF	NMF	NMF	NMF	1.2%	2.2%	2.0%	3.0%	Retained to Com Eq	5.0%			
Avg. Indust. Use (MWH)						63%	68%	66%	108%	NMF	NMF	NMF	NMF	87%	78%	79%	71%	All Div'ds to Net Prof	59%			
Avg. Indust. Revs. per KWH (¢)																						
Capacity at Peak (Mw)																						
Peak Load, Winter (Mw)																						
Annual Load Factor (%)																						
% Change Customers (yr-end)																						
Fixed Charge Cov. (%)						257	359	336														
ANNUAL RATES						Past 10 Yrs	Past 5 Yrs	Est'd '12-'14														
of change (per sh)						-2.0%	-8.5%	'to '18-'20														
Revenues						-1.0%	-5%	7.5%														
"Cash Flow"						-2.0%	2.0%	9.0%														
Earnings						1.0%	--	1.5%														
Dividends						1.0%	--	1.5%														
Book Value						1.0%	-4.5%	3.5%														
Cal-endar	QUARTERLY REVENUES (\$mill.)				Full Year																	
	Mar.31	Jun.30	Sep.30	Dec.31																		
2012	219.9	211.4	215.3	212.6	859.2																	
2013	218.0	212.4	229.8	233.1	893.3																	
2014	215.0	194.4	196.5	193.4	799.3																	
2015	202.8	188.2	205	209	805																	
2016	215	210	215	220	860																	
Cal-endar	EARNINGS PER SHARE ^A				Full Year																	
	Mar.31	Jun.30	Sep.30	Dec.31																		
2012	.28	.19	.13	.47	1.05																	
2013	.41	.21	.41	.35	1.37																	
2014	.59	.27	.43	.28	1.55																	
2015	.37	.36	.44	.43	1.60																	
2016	.45	.35	.48	.47	1.75																	
Cal-endar	QUARTERLY DIVIDENDS PAID ^B				Full Year																	
	Mar.31	Jun.30	Sep.30	Dec.31																		
2011	.298	.298	.298	.298	1.19																	
2012	.298	.298	.298	.298	1.19																	
2013	.298	.298	.298	.298	1.19																	
2014	.303	.303	.303	.303	1.21																	
2015	.308	.308	.308																			

BUSINESS: Otter Tail Corporation is the parent of Otter Tail Power Company, which supplies electricity to over 130,000 customers in Minnesota (50% of retail elec. revs.), North Dakota (42%), and South Dakota (8%). Electric rev. breakdown, '14: residential, 32%; commercial & farms, 37%; industrial, 25%; other, 6%. Fuel costs: 16.6% of revenues. Also has operations in manufacturing and plastics. 2014 depr. rate: 2.9%. Has 1,893 employees. Off. and dir. own 1.4% of common stock: Cascade Investment, LLC, 9.3%; Vanguard Group, Inc., 6.6%; BlackRock, Inc., 5.5% (2/15 Proxy). CEO: Charles MacFarlane. Inc.: MN. Address: 215 South Cascade St., P.O. Box 496, Fergus Falls, Minnesota 56538-0496. Telephone: 866-410-8780. Internet: www.ottertail.com.

Costs. That said, this should be partly offset by softness in retail sales due to milder-than-normal weather, a decline in transmission revenue, and an increase in depreciation, property tax expense, and short-term interest costs. Elsewhere, earnings from the Manufacturing and Plastics segments may well decline for 2015. Softness in various end markets served by BTD's customers should continue to hurt performance at the Manufacturing line. A decrease in sales of polyvinyl chloride pipe will likely hurt results at the Plastics business, but this ought to be partly offset by lower material costs.

These shares are ranked to lag the overall market for the coming six to 12 months. This stock has traded lower over the past six months, and the weakness may well continue going forward. But patient, income-seeking accounts may want to take a closer look. Earnings growth ought to pick up at Otter Tail as demand improves down the road. This equity offers solid total return potential for the pull to late decade, which is supported by a healthy dividend yield.

Michael Napoli, CFA *September 18, 2015*

PG&E CORP. NYSE-PCG				RECENT PRICE	54.33	P/E RATIO	23.3	(Trailing: 17.6) (Median: 15.0)	RELATIVE P/E RATIO	1.29	DIV'D YLD	3.3%	VALUE LINE						
TIMELINESS	4	Lowered 10/16/15	High: 34.5 Low: 25.9	40.1 31.8	48.2 36.3	52.2 42.6	45.7 26.7	45.8 34.5	48.6 34.9	48.0 36.8	47.0 39.4	48.5 39.9	55.2 39.4	60.2 47.3	Target Price Range 2018 2019 2020				
SAFETY	3	Lowered 2/13/12	LEGENDS 0.92 x Dividends p sh divided by Interest Rate Relative Price Strength Options: Yes Shaded area indicates recession																
TECHNICAL	3	Raised 10/23/15																	
BETA	.65	(1.00 = Market)																	
2018-20 PROJECTIONS																			
Price	60	Gain (+10%)	Ann'l Total Return																
High	60	60	6%																
Low	40	(-25%)	-3%																
Insider Decisions																			
D	J	F	M	A	M	J	J	A											
to Buy	0	0	0	0	0	0	0	0											
Options	0	0	0	0	0	0	0	0											
to Sell	0	0	0	4	0	1	0	0											
Institutional Decisions																			
4Q2014	1Q2015	2Q2015																	
to Buy	270	252	238																
to Sell	182	226	219																
Hld's(000)	381385	383113	385342																
% TOT. RETURN 9/15																			
THIS STOCK VL ARITH. INDEX																			
1 yr. 21.4 -4.0																			
3 yr. 38.0 37.9																			
5 yr. 41.0 68.4																			
1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC 18-20	
57.74	67.75	63.18	32.74	25.05	26.47	31.78	36.02	37.42	40.51	36.15	35.02	36.28	34.92	34.16	35.91	35.90	36.45	Revenues per sh 41.25	
7.15	.80	5.66	1.14	4.80	5.71	7.12	7.76	8.02	8.44	8.37	8.22	8.08	7.32	6.33	8.13	7.70	9.10	"Cash Flow" per sh 10.75	
2.24	d9.21	3.02	d2.36	2.05	2.12	2.35	2.76	2.78	3.22	3.03	2.82	2.78	2.07	1.83	3.06	1.90	3.30	Earnings per sh A 4.25	
1.20	1.20	--	--	--	--	1.23	1.32	1.44	1.56	1.68	1.82	1.82	1.82	1.82	1.82	1.82	1.82	Div'd Decl'd per sh B = + 2.20	
4.39	4.54	7.33	7.94	4.08	3.72	4.90	6.90	7.83	10.05	10.68	9.62	9.79	10.74	11.40	10.16	11.20	11.00	Cap'l Spending per sh 11.50	
19.10	8.19	11.89	9.47	10.12	20.62	19.60	22.44	24.18	25.97	27.88	28.55	29.35	30.35	31.41	33.09	33.55	35.55	Book Value per sh C 42.25	
360.59	387.19	363.38	381.67	416.52	418.62	368.27	348.14	353.72	361.06	370.60	395.23	412.26	430.72	456.67	475.91	490.00	505.00	Common Shs Outst'g D 520.00	
13.1	--	4.8	--	9.5	13.8	15.4	14.8	16.8	12.1	13.0	15.8	15.5	20.7	23.7	15.0	Avg Ann'l P/E Ratio 12.0			
.75	--	--	--	.54	.73	.82	.80	.89	.73	.87	1.01	.97	1.32	1.33	.79	Relative P/E Ratio .75			
4.1%	4.8%	--	--	--	--	3.4%	3.2%	3.1%	4.0%	4.3%	4.1%	4.2%	4.2%	4.2%	4.0%	Avg Ann'l Div'd Yield 4.4%			
CAPITAL STRUCTURE as of 6/30/15																			
Total Debt \$16560 mill. Due in 5 yrs \$3789 mill.																			
LT Debt \$15544 mill. LT Interest \$732 mill.																			
Incl. \$69 mill. capitalized leases.																			
(LT interest earned: 4.0x)																			
Pension Assets-12/14 \$14216 mill.																			
Obblig. \$16696 mill.																			
Pfd Stock \$252 mill. Pfd Div'd \$14 mill.																			
4,534,958 shs. 4.36% to 5%, cumulative and \$25 par, redeemable from \$25.75 to \$27.25; 5,784,825 shs. 5.00% to 6.00%, cumulative nonredeemable and \$25 par.																			
Common Stock 482,010,056 shs. as of 7/20/15																			
MARKET CAP: \$26 billion (Large Cap)																			
ELECTRIC OPERATING STATISTICS																			
2012 2013 2014																			
% Change Retail Sales (KWH)																			
Avg. Indust. Use (MWH)																			
Avg. Indust. Revs. per KWH (¢)																			
Capacity at Peak (MW)																			
Peak Load, Summer (MW)																			
Annual Load Factor (%)																			
% Change Customers (yr-end)																			
Fixed Charge Cov. (%)																			
ANNUAL RATES																			
of change (per sh)																			
Revenues																			
"Cash Flow"																			
Earnings																			
Dividends																			
Book Value																			
BUSINESS: PG&E Corporation is a holding company for Pacific Gas and Electric Company and nonutility subsidiaries. Supplies electricity and gas to most of northern and central California. Has 5.3 million electric and 4.4 million gas customers. Electric revenue breakdown: residential, 38%; commercial, 40%; industrial, 12%; agricultural, 9%; other, 1%. Generating sources: nuclear, 21%; hydro, 8%; gas, 7%; purchased, 64%. Fuel costs: 38% of revenues. '14 reported depreciation rate (utility): 3.8%. Has 22,600 employees. Chairman, President & Chief Executive Officer: Anthony F. Earley, Jr. Incorporated: California. Address: 77 Beale Street, P.O. Box 770000, San Francisco, California 94177. Telephone: 415-973-1000. Internet: www.pgecorp.com.																			
Finally, the CPUC has opened an investigation about the company's safety culture. The utility is awaiting an order on its gas transportation and storage case. PG&E is asking for rate increases of \$532 million in 2015, \$83 million in 2016, and \$142 million in 2017. The CPUC will put forth its ruling next year, and will determine how much of the increase will be reduced as part of the aforementioned San Bruno penalties. It will be retroactive to the start of 2015, so the income that PG&E would have booked this year will be reflected in the quarter in which the final decision comes. This makes profits much less predictable than our Earnings Predictability Index suggests. The board of directors hasn't raised the dividend since the San Bruno accident, and we expect no increase again next year. We think dividend hikes will resume in 2017, though. We think this untimely stock lacks appeal for most investors. There are numerous utility issues that have higher yields, better defined dividend growth prospects, and less regulatory risk. Paul E. Debbas, CFA October 30, 2015																			
PG&E has filed a general rate case. The utility requested increases of \$457 million in 2017, \$489 million in 2018, and \$390 million in 2020. PG&E has requested that the California Public Utilities Commission (CPUC) issue an order by the end of 2016, but even if the ruling is slow to come, it will be retroactive to the start of 2017. The San Bruno accident is not entirely behind the company. In September of 2010, a gas pipeline explosion in San Bruno, California killed eight people, injured dozens, and caused extensive property damage. The CPUC fined the utility (excluded from our earnings presentation), disallowed recovery of certain costs (included), and ordered the company to pay customer bill credits (also included). This is partly why PG&E expects to issue \$700 million-\$800 million of common equity this year. The utility did not seek recovery of pipeline safety enhancement costs needed to upgrade its system, which is why earnings have been weak (partly offset by insurance recoveries) in recent years. PG&E has also come under criticism for ex parte communications between it and the CPUC.																			
Cal-endar	QUARTERLY REVENUES (\$ mill.)				Full Year														
	Mar.31	Jun.30	Sep.30	Dec.31															
2012	3641	3593	3976	3830	15040														
2013	3672	3776	4175	3975	15598														
2014	3891	3952	4939	4308	17090														
2015	3899	4217	4934	4550	17600														
2016	4350	4350	5100	4600	18400														
Cal-endar	EARNINGS PER SHARE A				Full Year														
	Mar.31	Jun.30	Sep.30	Dec.31															
2012	.66	.55	.87	d.01	2.07														
2013	.55	.74	.36	.19	1.83														
2014	.49	.57	1.71	.27	3.06														
2015	.27	.83	.70	.10	1.90														
2016	.70	.80	1.20	.60	3.30														
Cal-endar	QUARTERLY DIVIDENDS PAID B = +				Full Year														
	Mar.31	Jun.30	Sep.30	Dec.31															
2011	.455	.455	.455	.455	1.82														
2012	.455	.455	.455	.455	1.82														
2013	.455	.455	.455	.455	1.82														
2014	.455	.455	.455	.455	1.82														
2015	.455	.455	.455	.455	1.82														

PORTLAND GENERAL NYSE-POR				RECENT PRICE	38.68	P/E RATIO	16.6	(Trailing: 18.6 Median: NMF)	RELATIVE P/E RATIO	0.92	DIV'D YLD	3.2%	VALUE LINE
TIMELINESS	3	Raised 8/14/15	High: 35.0	31.3	27.7	21.4	22.7	26.0	28.1	33.3	40.3	41.0	Target Price Range 2018 2019 2020
SAFETY	2	Raised 5/4/12	Low: 24.2	25.5	15.4	13.5	17.5	21.3	24.3	27.4	29.0	33.0	2018 2019 2020
TECHNICAL	3	Raised 10/23/15	<div>LEGENDS 0.74 x Dividends p sh divided by Interest Rate Relative Price Strength Options: Yes Shaded area indicates recession</div>										
BETA	.80	(1.00 = Market)	<div>2018-20 PROJECTIONS Ann'l Total Price 40 Gain (+5%) 4% Low 30 (-20%) -2%</div>										
Insider Decisions			<div>D J F M A M J J A to Buy 0 0 0 0 0 0 0 0 Options 0 0 0 0 0 0 0 0 to Sell 0 0 0 1 0 1 0 0</div>										
Institutional Decisions			<div>4Q2014 1Q2015 2Q2015 to Buy 132 122 112 to Sell 127 142 136 Hld's(000) 82456 84710 86966</div>										
On April 3, 2006, Portland General Electric's existing stock (which was owned by Enron) was canceled, and 62.5 million shares were issued to Enron's creditors or the Disputed Claims Reserve (DCR). The stock began trading on a when-issued basis that day, and regular trading began on April 10, 2006. Shares issued to the DCR were released over time to Enron's creditors until all of the remaining shares were released in June, 2007.			<div>Percent shares traded 21 14 7</div>										
CAPITAL STRUCTURE as of 6/30/15 Total Debt \$2259 mill. Due in 5 Yrs \$555 mill. LT Debt \$2204 mill. LT Interest \$115 mill. (LT interest earned: 2.2x) Leases, Uncapitalized Annual rentals \$10 mill.			<div>2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016</div>										
Pension Assets-12/14 \$591 mill. Oblig. \$777 mill.			<div>© VALUE LINE PUB. LLC 18-20</div>										
Pfd Stock None			<div>Revenues per sh 24.25 "Cash Flow" per sh 7.00 Earnings per sh 2.75 Div'd Decl'd per sh 1.50 Cap'l Spending per sh 3.25 Book Value per sh 30.25 Common Shs Outst'g 89.70</div>										
Common Stock 88,765,889 shs. as of 7/22/15			<div>Avg Ann'l P/E Ratio 12.5 Relative P/E Ratio .80 Avg Ann'l Div'd Yield 4.4%</div>										
MARKET CAP: \$3.4 billion (Mid Cap)			<div>2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016</div>										
ELECTRIC OPERATING STATISTICS			<div>2012 2013 2014 % Change Retail Sales (KWH) -8 +1.2 -8 Avg. Indust. Use (MWH) 16409 16258 16577 Avg. Indust. Revs. per KWH (¢) 5.26 4.84 5.13 Capacity at Peak (Mw) 4173 4380 4910 Peak Load, Winter (Mw) F 3597 3869 3866 Annual Load Factor (%) NA NA NA % Change Customers (yr-end) +.7 +.9 +.7</div>										
Fixed Charge Cov. (%)			<div>270 239 248</div>										
ANNUAL RATES of change (per sh)			<div>Past 10 Yrs. Past 5 Yrs. Est'd '12-'14 to '18-'20</div>										
Revenues			<div>-- -2.0% .5%</div>										
"Cash Flow"			<div>-- 3.0% 4.5%</div>										
Earnings			<div>-- 3.0% 6.0%</div>										
Dividends			<div>-- 2.5% 5.5%</div>										
Book Value			<div>-- 2.0% 4.5%</div>										
Cal-endar			<div>QUARTERLY REVENUES (\$ mill.) Mar.31 Jun.30 Sep.30 Dec.31 Full Year</div>										
2012			<div>479.0 413.0 450.0 463.0 1805.0</div>										
2013			<div>473.0 403.0 435.0 499.0 1810.0</div>										
2014			<div>493.0 423.0 484.0 500.0 1900.0</div>										
2015			<div>473.0 450.0 475 477 1875</div>										
2016			<div>525 460 505 510 2000</div>										
Cal-endar			<div>EARNINGS PER SHARE A Mar.31 Jun.30 Sep.30 Dec.31 Full Year</div>										
2012			<div>.65 .34 .50 .38 1.87</div>										
2013			<div>.65 .13 .40 .59 1.77</div>										
2014			<div>.73 .43 .47 .55 2.18</div>										
2015			<div>.62 .44 .50 .59 2.15</div>										
2016			<div>.80 .47 .53 .60 2.40</div>										
Cal-endar			<div>QUARTERLY DIVIDENDS PAID B + Mar.31 Jun.30 Sep.30 Dec.31 Full Year</div>										
2011			<div>.26 .26 .265 .265 1.05</div>										
2012			<div>.265 .265 .27 .27 1.07</div>										
2013			<div>.27 .27 .275 .275 1.09</div>										
2014			<div>.275 .275 .28 .28 1.11</div>										
2015			<div>.28 .28 .30 .30</div>										
BUSINESS: Portland General Electric Company (PGE) provides electricity to 844,000 customers in 52 cities in a 4,000-square-mile area of Oregon, including Portland and Salem. The company is in the process of decommissioning the Trojan nuclear plant, which it closed in 1993. Electric revenue breakdown: residential, 47%; commercial, 34%; industrial, 12%; other, 7%. Generating sources: coal, 21%; gas, 16%; hydro, 8%; wind, 6%; purchased, 49%. Fuel costs: 38% of revenues. '14 reported depreciation rate: 3.6%. Has 2,600 employees. Chairman: Jack E. Davis. President and Chief Executive Officer: James J. Piro. Incorporated: Oregon. Address: 121 S.W. Salmon Street, Portland, Oregon 97204. Telephone: 503-464-8000. Internet: www.portlandgeneral.com.			<div>weather conditions. Our \$2.15-a-share profit estimate is within the company's targeted range of \$2.05-\$2.20. We forecast low double-digit profit growth in 2016. The rate increase will help once the gas-fired plant begins operating. We assume normal winter weather, as well. And PGE is benefiting from the economic recovery in its service territory. Portland General has been one of the best-performing utility equities in 2015. Its price has advanced slightly in what has been a bad year for utilities. We think some takeover speculation is reflected in the quotation. However, we advise against purchasing this issue on the hope of a buyout. More than 10 years ago, a takeover attempt failed to win regulatory approval. This stock has a high valuation among electric utilities. The dividend yield is about a half percentage point below the utility mean. With the recent price above the midpoint of our 2018-2020 Target Price Range, total return potential is low, despite the company's good dividend growth prospects. Paul E. Debbas, CFA October 30, 2015</div>										

(A) Diluted EPS. Excl. nonrecurring loss: '13, 42¢. Next earnings report due mid-Feb. (B) Dividends paid mid-Jan., Apr., July, and Oct. ■ Dividend reinvestment plan avail. †

Shareholder investment plan avail. (C) Incl. deferred charges. In '14: \$6.31/sh. (D) In mill. (E) Rate base: Net original cost. Rate allowed on com. eq. in '15: 9.68%; earned on avg. com.

eq., '14: 9.4%. Regulatory Climate: Average. (F) Summer peak in '12. (G) '05 per-share data are pro forma, based on shares outstanding when stock began trading in '06.

PINNACLE WEST NYSE-PNW					RECENT PRICE	65.74	P/E RATIO	17.0 (Trailing: 18.8 Median: 15.0)	RELATIVE P/E RATIO	0.94	DIV'D YLD	3.8%	VALUE LINE						
TIMELINESS	3	Raised 10/16/15	High: 45.8	46.7	51.0	51.7	42.9	38.0	42.7	48.9	54.7	61.9	71.1	73.3					Target Price Range
SAFETY	1	Raised 5/3/13	Low: 36.3	39.8	38.3		26.3	22.3	32.3	37.3	45.9	51.5	51.2	56.0					2018 2019 2020
TECHNICAL	3	Raised 10/23/15	LEGENDS 0.70 x Dividends p sh divided by Interest Rate Relative Price Strength Options: Yes Shaded area indicates recession																
BETA	.75	(1.00 = Market)																	
2018-20 PROJECTIONS																			
Price	70	Gain (+5%)	Ann'l Total Return																
High	70	55	5%																
Low	55		Nil																
Insider Decisions																			
D	J	F	M	A	M	J	J	A											
to Buy	0	0	0	0	0	0	0	0											
Options to Buy	0	0	0	0	0	0	0	0											
to Sell	3	0	0	1	0	0	0	0											
Institutional Decisions																			
4Q2014	10Q2015	20Q2015																	
to Buy	191	182	175																
to Sell	188	194	180																
Hld's(000)	88401	86769	87394																
Percent shares traded	30	20	10																
1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC 18-20	
28.57	43.50	53.66	28.90	30.87	31.59	30.16	34.03	35.07	33.37	32.50	30.01	29.67	30.09	31.35	31.58	31.55	32.75	Revenues per sh	36.50
7.73	7.99	8.72	7.01	7.33	6.93	5.76	9.70	9.29	8.13	8.08	6.85	7.52	7.92	8.15	8.09	8.80	9.15	"Cash Flow" per sh	10.50
3.18	3.35	3.68	2.53	2.52	2.58	2.24	3.17	2.96	2.12	2.26	3.08	2.99	3.50	3.66	3.58	3.85	3.95	Earnings per sh ^A	4.50
1.33	1.43	1.53	1.63	1.73	1.83	1.93	2.03	2.10	2.10	2.10	2.10	2.10	2.67	2.23	2.33	2.44	2.56	Div'd Decl'd per sh ^B	2.95
4.05	7.76	12.27	9.81	7.60	5.86	6.39	7.59	9.37	9.46	7.64	7.03	8.26	8.24	9.36	8.38	9.85	10.35	Cap'l Spending per sh	9.75
26.00	28.09	29.46	29.44	31.00	32.14	34.57	34.48	35.15	34.16	32.69	33.86	34.98	36.20	38.07	39.50	40.95	42.35	Book Value per sh ^C	47.25
84.83	84.83	84.83	91.26	91.29	91.79	99.08	99.96	100.49	100.89	101.43	108.77	109.25	109.74	110.18	110.57	111.00	111.50	Common Shs Outst'g ^D	118.00
11.9	11.3	12.0	14.4	14.0	15.8	19.2	13.7	14.9	16.1	13.7	12.6	14.6	14.3	15.3	15.9	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	13.5
.68	.73	.61	.79	.80	.83	1.02	.74	.79	.97	.91	.80	.92	.91	.86	.84			Relative P/E Ratio	.85
3.5%	3.8%	3.5%	4.5%	4.9%	4.5%	4.5%	4.7%	4.8%	6.2%	6.8%	5.4%	4.8%	5.3%	4.0%	4.1%			Avg Ann'l Div'd Yield	4.8%
CAPITAL STRUCTURE as of 6/30/15																			
Total Debt \$3826.1 mill. Due in 5 Yrs \$1587.1 mill.										2988.0	3401.7	3523.6	3367.1	3297.1	3263.6	3241.4	3301.8	3454.6	3491.6
LT Debt \$3565.9 mill. LT Interest \$174.1 mill.										223.2	317.1	298.8	213.6	229.2	330.4	328.2	387.4	406.1	397.6
Incl. \$13.4 mill. Palo Verde sale leaseback lessor notes.										36.2%	33.0%	33.6%	23.4%	36.9%	31.9%	34.0%	36.2%	34.4%	34.2%
(LT interest earned: 4.8x)										10.4%	11.1%	14.8%	17.5%	11.2%	11.7%	12.8%	9.7%	10.0%	11.6%
Leases, Uncapitalized Annual rentals \$18.0 mill.										43.2%	48.4%	47.0%	46.8%	50.4%	45.3%	44.1%	44.6%	40.0%	41.0%
Pension Assets-12/14 \$2615.4 mill.										56.8%	51.6%	53.0%	53.2%	49.6%	54.7%	55.9%	55.4%	60.0%	59.0%
Oblig. \$3078.7 mill.										6033.4	6678.7	6658.7	6477.6	6686.6	6729.1	6840.9	7171.9	6990.9	7398.7
Pfd Stock None										7577.1	7881.9	8436.4	8916.7	9257.8	9578.8	9962.3	10396	10889	11194
Common Stock 110,813,659 shs.										5.0%	6.2%	5.9%	4.7%	4.8%	6.5%	6.4%	6.8%	7.1%	6.4%
as of 7/24/15										6.5%	9.2%	8.5%	6.2%	6.9%	9.0%	8.6%	9.8%	9.7%	9.1%
MARKET CAP: \$7.3 billion (Large Cap)										6.5%	9.2%	8.5%	6.2%	6.9%	9.0%	8.6%	9.8%	9.7%	9.1%
ELECTRIC OPERATING STATISTICS										1.0%	3.4%	2.5%	.3%	.7%	3.1%	2.8%	4.1%	4.1%	3.5%
										85%	63%	70%	96%	89%	66%	68%	58%	58%	62%
										2012	2013	2014							
										-2	-2	-1.8							
										647	644	659							
										7.86	8.21	8.26							
										8864	8398	9259							
										7207	6927	7007							
										48.8	50.0	48.6							
										+1.3	+1.4	+1.2							
										397	419	404							
ANNUAL RATES										Past 10 Yrs.	Past 5 Yrs.	Est'd '12-'14							
of change (per sh)										-	-1.5%	3.0%							
Revenues										1.5%	-1.0%	4.5%							
"Cash Flow"										3.5%	8.0%	4.0%							
Earnings										3.5%	3.0%	3.5%							
Dividends										2.0%	2.0%	3.5%							
Book Value																			
Cal-endar	QUARTERLY REVENUES (\$ mill.)												Full Year						
	Mar.31	Jun.30	Sep.30	Dec.31															
2012	620.6	878.6	1109.5	693.1									3301.8						
2013	686.6	915.8	1152.4	699.8									3454.6						
2014	686.2	906.3	1172.7	726.4															
2015	671.2	890.6	1200	738.2															
2016	700	975	1225	750															
Cal-endar	EARNINGS PER SHARE ^A												Full Year						
	Mar.31	Jun.30	Sep.30	Dec.31															
2012	d.07	1.12	2.21	.24									3.50						
2013	.22	1.18	2.04	.22									3.66						
2014	.14	1.19	2.20	.05									3.58						
2015	.14	1.10	2.41	.20									3.85						
2016	.15	1.30	2.30	.20									3.95						
Cal-endar	QUARTERLY DIVIDENDS PAID ^B												Full Year						
	Mar.31	Jun.30	Sep.30	Dec.31															
2011	.525	.525	.525	.525									2.10						
2012	.525	.525	.525	.545									2.12						
2013	.545	.545	.545	.5675									2.20						
2014	.5675	.5675	.5675	.595									2.30						
2015	.595	.595	.595	.625															

PINNACLE WEST **NYSE-PNW**

RECENT PRICE **65.74** P/E RATIO **17.0** (Trailing: 18.8 Median: 15.0) RELATIVE P/E RATIO **0.94** DIV'D YLD **3.8%** VALUE LINE

TIMELINESS **3** Raised 10/16/15
SAFETY **1** Raised 5/3/13
TECHNICAL **3** Raised 10/23/15
BETA .75 (1.00 = Market)

2018-20 PROJECTIONS

Price	70	Gain (+5%)	Ann'l Total Return
High	70	55	5%
Low	55		Nil

Insider Decisions

D	J	F	M	A	M	J	J	A
to Buy	0	0	0	0	0	0	0	0
Options to Buy	0	0	0	0	0	0	0	0
to Sell	3	0	0	1	0	0	0	0

Institutional Decisions

4Q2014	10Q2015	20Q2015	
to Buy	191	182	175
to Sell	188	194	180
Hld's(000)	88401	86769	87394
Percent shares traded	30	20	10

% TOT. RETURN 9/15

THIS STOCK	VL ARITH. INDEX
1 yr. 21.9	-4.0
3 yr. 36.6	37.9
5 yr. 91.7	68.4

1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016

28.57	43.50	53.66	28.90	30.87	31.59	30.16	34.03	35.07	33.37	32.50	30.01	29.67	30.09	31.35	31.58	31.55	32.75		
7.73	7.99	8.72	7.01	7.33	6.93	5.76	9.70	9.29	8.13	8.08	6.85	7.52	7.92	8.15	8.09	8.80	9.15		
3.18	3.35	3.68	2.53	2.52	2.58	2.24	3.17	2.96	2.12	2.26	3.08	2.99	3.50	3.66	3.58	3.85	3.95		
1.33	1.43	1.53	1.63	1.73	1.83	1.93	2.03	2.10	2.10	2.10	2.10	2.10	2.67	2.23	2.33	2.44	2.56		
4.05	7.76	12.27	9.81	7.60	5.86	6.39	7.59	9.37	9.46	7.64	7.03	8.26	8.24	9.36	8.38	9.85	10.35		
26.00	28.09	29.46	29.44	31.00	32.14	34.57	34.48	35.15	34.16	32.69	33.86	34.98	36.20	38.07	39.50	40.95	42.35		
84.83	84.83	84.83	91.26	91.29	91.79	99.08	99.96	100.49	100.89	101.43	108.77	109.25	109.74	110.18	110.57	111.00	111.50		
11.9	11.3	12.0	14.4	14.0	15.8	19.2	13.7	14.9	16.1	13.7	12.6	14.6	14.3	15.3	15.9	Bold figures are Value Line estimates			
.68	.73	.61	.79	.80	.83	1.02	.74	.79	.97	.91	.80	.92	.91	.86	.84				
3.5%	3.8%	3.5%	4.5%	4.9%	4.5%	4.5%	4.7%	4.8%	6.2%	6.8%	5.4%	4.8%	5.3%	4.0%	4.1%				
CAPITAL STRUCTURE as of 6/30/15																			
Total Debt \$3826.1 mill. Due in 5 Yrs \$1587.1 mill.										2988.0	3401.7	3523.6	3367.1	3297.1	3263.6	3241.4	3301.8	3454.6	3491.6
LT Debt \$3565.9 mill. LT Interest \$174.1 mill.										223.2	317.1	298.8	213.6	229.2	330.4	328.2	387.4	406.1	397.6
Incl. \$13.4 mill. Palo Verde sale leaseback lessor notes.										36.2%	33.0%	33.6%	23.4%	36.9%	31.9%	34.0%	36.2%	34.4%	34.2%
(LT interest earned: 4.8x)										10.4%	11.1%	14.8%	17.5%	11.2%	11.7%	12.8%	9.7%	10.0%	11.6%
Leases, Uncapitalized Annual rentals \$18.0 mill.										43.2%	48.4%	47.0%	46.8%	50.4%	45.3%	44.1%	44.6%	40.0%	41.0%
Pension Assets-12/14 \$2615.4 mill.										56.8%	51.6%	53.0%	53.2%	49.6%	54.7%	55.9%	55.4%	60.0%	59.0%
Oblig. \$3078.7 mill.										6033.4	6678.7	6658.7	6477.6	6686.6	6729.1	6840.9	7171.9	6990.9	7398.7
Pfd Stock None										7577.1	7881.9	8436.4	8916.7	9257.8	9578.8	9962.3	10396	10889	11194
Common Stock 110,813,659 shs.										5.0%	6.2%	5.9%	4.7%	4.8%	6.5%	6.4%	6.8%	7.1%	6.4%
as of 7/24/15										6.5%	9.2%	8.5%	6.2%	6.9%	9.0%	8.6%	9.8%	9.7%	9.1%
MARKET CAP: \$7.3 billion (Large Cap)										6.5%	9.2%	8.5%	6.2%	6.9%	9.0%	8.6%	9.8%	9.7%	9.1%
ELECTRIC OPERATING STATISTICS										1.0%	3.4%	2.5%	.3%	.7%	3.1%	2.8%	4.1%	4.1%	3.5%
										85%	63%	70%	96%	89%	66%	68%	58%	58%	62%
										2012	2013	2014							
										-2	-2	-1.8							
										647	644	659							
										7.86	8.21	8.26							
										8864	8398	9259							
										7207	6927	7007							
										48.8	50.0	48.6							
										+1.3	+1.4	+1.2							
										397	419	404							
ANNUAL RATES										Past 10 Yrs.	Past 5 Yrs.	Est'd '12-'14							
of change (per sh)										-	-1.5%	3.0%							
Revenues										1.5%	-1.0%	4.5%							
"Cash Flow"										3.5%	8.0%	4.0%							
Earnings										3.5%	3.0%	3.5%							
Dividends										2.0%	2.0%	3.5%							
Book Value																			
Cal-endar	QUARTERLY REVENUES (\$ mill.)												Full Year						
	Mar.31	Jun.30	Sep.30	Dec.31															
2012	620.6	878.6	1109.5	693.1									3301.8						
2013	686.6	915.8	1152.4																

P.S. ENTERPRISE GP. NYSE-PEG										RECENT PRICE	38.91	P/E RATIO	13.0 (Trailing: 10.7; Median: 13.0)	RELATIVE P/E RATIO	0.73	DIV'D YLD	4.2%	VALUE LINE	Target Price Range			
TIMELINESS	3	Lowered 9/19/14	High: 26.3	34.2	36.3	49.9	52.3	34.1	34.9	35.5	34.1	37.0	43.8	44.4					2018	2019	2020	
SAFETY	1	Raised 11/23/12	Low: 19.0	24.7	29.5	32.2	22.1	23.7	29.0	28.0	28.9	29.7	31.3	38.2								
TECHNICAL	1	Raised 11/20/15	LEGENDS 0.80 x Dividends p sh divided by Interest Rate Relative Price Strength 2-for-1 split 2/08 Options: Yes Shaded area indicates recession																			
BETA	.75	(1.00 = Market)																				
2018-20 PROJECTIONS																						
Price	50	Gain (+30%)	Ann'l Total Return																			
High	50	40	10%																			
Low	40		5%																			
Insider Decisions																						
	D	J	F	M	A	M	J	J	A													
to Buy	0	0	0	0	0	0	0	0	0													
Options	0	0	0	0	0	0	0	0	0													
to Sell	0	0	0	1	0	0	1	0	1													
Institutional Decisions																						
	4Q2014	1Q2015	2Q2015																			
to Buy	315	303	310																			
to Sell	237	282	254																			
Hld's(000)	329591	335925	334720																			
Percent shares traded																						
	30	20	10																			
1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC 18-20				
15.01	22.83	23.84	18.62	23.54	23.09	24.74	24.07	25.28	27.94	24.57	23.31	22.42	19.33	19.71	21.52	20.95	21.45	Revenues per sh			24.25	
2.82	2.71	3.14	3.01	2.92	3.02	3.42	3.91	4.36	4.68	4.98	5.27	5.36	4.87	5.17	5.82	6.20	6.25	"Cash Flow" per sh			7.50	
1.56	1.78	1.85	1.88	1.88	1.52	1.79	1.85	2.59	2.90	3.08	3.07	3.11	2.44	2.45	2.99	3.15	2.95	Earnings per sh ^A			3.50	
1.08	1.08	1.08	1.08	1.08	1.10	1.12	1.14	1.17	1.29	1.33	1.37	1.37	1.42	1.44	1.48	1.56	1.64	Div'd Decl'd per sh ^B [†]			1.90	
1.34	2.31	4.99	4.03	2.86	2.64	2.04	2.01	2.65	3.50	3.55	4.27	4.12	5.09	5.56	5.58	6.70	7.10	Cap'l Spending per sh			4.75	
9.23	9.61	10.05	8.85	11.71	12.05	11.99	13.35	14.35	15.36	17.37	19.04	20.30	21.31	22.95	24.09	25.70	27.00	Book Value per sh ^C			31.50	
432.83	415.94	411.68	450.53	472.27	476.20	502.33	505.29	508.52	506.02	505.99	505.97	505.95	505.89	505.86	505.84	506.00	506.00	Common Shs Outst'g ^D			506.00	
12.5	10.3	12.0	10.0	10.6	14.3	16.5	17.8	16.5	13.6	10.0	10.4	10.4	12.8	13.5	12.6	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio			13.0	
.71	.67	.61	.55	.60	.76	.88	.96	.88	.82	.67	.66	.65	.81	.76	.67			Relative P/E Ratio			.80	
5.5%	5.9%	4.9%	5.7%	5.4%	5.1%	3.8%	3.5%	2.7%	3.3%	4.3%	4.3%	4.2%	4.6%	4.4%	3.9%			Avg Ann'l Div'd Yield			4.2%	
CAPITAL STRUCTURE as of 9/30/15						12430	12164	12853	14139	12431	11793	11343	9781.0	9968.0	10886	10600	10850	Revenues (\$mill)			12250	
Total Debt \$9258 mill. Due in 5 Yrs \$3171 mill.						862.0	934.0	1323.0	1477.0	1567.0	1557.0	1577.0	1239.0	1243.0	1518.0	1600	1505	Net Profit (\$mill)			1775	
LT Debt \$8132 mill. LT Interest \$362 mill.						38.6%	36.6%	44.5%	45.9%	42.3%	40.5%	40.4%	36.2%	39.5%	38.2%	38.0%	38.0%	Income Tax Rate			38.0%	
Incl. \$68 mill. securitized bonds. (LT interest earned: 7.7x)						11.5%	4.7%	2.7%	3.2%	3.8%	5.5%	2.7%	4.8%	4.6%	4.5%	5.0%	5.0%	AFUDC % to Net Profit			3.0%	
Leases, Uncapitalized Annual rentals \$21 mill.						64.9%	60.3%	54.0%	50.5%	46.3%	44.8%	42.1%	38.3%	40.4%	40.4%	40.5%	41.0%	Long-Term Debt Ratio			43.5%	
Pension Assets-12/14 \$5293 mill.						34.6%	39.2%	45.5%	49.0%	53.2%	55.2%	57.9%	61.7%	59.6%	59.6%	59.5%	59.0%	Common Equity Ratio			56.5%	
Pfd Stock None						17381	17197	16041	15856	16513	17452	17731	17467	19470	20446	21850	23225	Total Capital (\$mill)			28200	
Oblig. \$5722 mill.						13336	13002	13275	14433	15440	16390	17849	19736	21645	23589	25500	27500	Net Plant (\$mill)			30600	
Common Stock 505,961,856 shs. as of 10/21/15						7.3%	7.7%	10.4%	11.2%	11.0%	10.4%	10.2%	8.1%	7.5%	8.4%	8.0%	7.5%	Return on Total Cap'l			7.5%	
MARKET CAP: \$20 billion (Large Cap)						14.1%	13.7%	17.9%	18.8%	17.7%	16.2%	15.4%	11.5%	10.7%	12.5%	12.5%	11.0%	Return on Shr. Equity			11.0%	
ELECTRIC OPERATING STATISTICS						14.2%	13.8%	18.1%	19.0%	17.8%	16.2%	15.4%	11.5%	10.7%	12.5%	12.5%	11.0%	Return on Com Equity ^E			11.0%	
2012 2013 2014						5.3%	5.3%	9.9%	10.5%	10.1%	9.0%	8.6%	4.8%	4.4%	6.3%	6.0%	5.0%	Retained to Com Eq			5.0%	
% Change Retail Sales (KWH)						63%	62%	45%	45%	43%	45%	44%	58%	59%	49%	49%	55%	All Div'ds to Net Prof			54%	
Avg. Indust. Use (MWH)						-2.1	-1.9	-1.3														
Avg. Indust. Revs. per KWH(c)						NA	NA	NA														
Capacity at Peak (Mw)						NA	NA	NA														
Peak Load, Summer (Mw)						10521	10414	9474														
Annual Load Factor (%)						NA	NA	NA														
% Change Customers (avg.)						NA	NA	NA														
Fixed Charge Cov. (%)						504	529	635														
ANNUAL RATES						Past 10 Yrs.	Past 5 Yrs.	Est'd '12-'14														
of change (per sh)						-5.5%	-5.0%	3.0%														
Revenues						6.0%	2.5%	6.0%														
"Cash Flow"						4.0%	-1.5%	5.0%														
Earnings						3.0%	2.5%	4.5%														
Dividends						7.5%	7.5%	5.5%														
Book Value																						
Cal-endar	QUARTERLY REVENUES (\$ mill.)				Full Year																	
	Mar.31	Jun.30	Sep.30	Dec.31																		
2012	2875	2098	2402	2406	9781.0																	
2013	2786	2310	2554	2318	9968.0																	
2014	3223	2249	2641	2773	10886																	
2015	3135	2314	2688	2463	10600																	
2016	3000	2500	2800	2550	10850																	
Cal-endar	EARNINGS PER SHARE ^A				Full Year																	
	Mar.31	Jun.30	Sep.30	Dec.31																		
2012	.97	.42	.68	.37	2.44																	
2013	.63	.66	.77	.39	2.45																	
2014	.76	.42	.87	.94	2.99																	
2015	1.15	.66	.87	.47	3.15																	
2016	1.05	.60	.80	.50	2.95																	
Cal-endar	QUARTERLY DIVIDENDS PAID ^B [†]				Full Year																	
	Mar.31	Jun.30	Sep.30	Dec.31																		
2011	.3425	.3425	.3425	.3425	1.37																	
2012	.355	.355	.355	.355	1.42																	
2013	.36	.36	.36	.36	1.44																	
2014	.37	.37	.37	.37	1.48																	
2015	.39	.39	.39																			

BUSINESS: Public Service Enterprise Group Incorporated is a holding company for Public Service Electric and Gas Company (PSE&G), which serves 2.2 million electric and 1.8 million gas customers in New Jersey, and PSEG Power LLC, a nonregulated power generator with nuclear, gas, and coal-fired plants in the Northeast. PSEG Energy Holdings is involved in renewable energy.

Public Service Enterprise Group has numerous investment opportunities that will enhance its earning power. Public Service Electric & Gas is spending \$1.22 billion to harden its system against severe storms, such as Hurricane Sandy in the fall of 2012. The utility has reached a settlement with the staff of the New Jersey Board of Public Utilities (BPU) and an intervenor that calls for it to spend \$905 million over a three-year period beginning in 2016 to modernize its gas system. The BPU must still put forth a ruling, which is expected by yearend. Electric transmission is another important area of investment. PSE&G estimates that by the end of 2019, transmission will make up 50% of its rate base, compared with 40% at the end of 2014. This will enhance the company's profitability because the allowed return on equity for transmission exceeds that for distribution. On the nonregulated side, PSEG Power plans to add two gas-fired generating plants in 2018. A 540-megawatt facility in New Jersey will cost an estimated \$625 million-\$675 million and a 755-mw unit in Maryland will cost \$825 million-\$875 million. All told, the

The company no longer breaks out data on electric and gas operating statistics. Fuel costs: 36% of revenues. '14 reported depreciation rate (utility): 2.5%. Has 12,700 employees. Chairman, President & Chief Executive Officer: Dr. Ralph Izzo. Inc.: New Jersey. Address: 80 Park Plaza, P.O. Box 1171, Newark, New Jersey 07101-1171. Telephone: 973-430-7000. Internet: www.pseg.com.

company has increased its five-year capital budget by 20%, to \$15.6 billion, since the start of 2015.

A transmission rate filing is pending. If approved by the Federal Energy Regulatory Commission, this would increase transmission revenues by \$146 million next year.

Even with all of these positive factors, the 2015 earnings tally will likely be tough to match next year. PSEG Power is still feeling the effects of weak capacity prices. In addition, the comparison will be difficult. In the first half of 2015, insurance recoveries for PSEG Power (stemming from Hurricane Sandy damage three years ago) boosted the bottom line by \$0.20 a share. Favorable weather patterns have also helped the company so far this year. And PSEG booked \$0.11 a share of mark-to-market accounting gains in the first nine months of 2015.

This high-quality stock might interest conservative income-oriented investors. The dividend yield and 3- to 5-year total return potential are slightly above average for a utility.

Paul E. Debbas, CFA November 20, 2015

VECTREN CORP. NYSE-VVC					RECENT PRICE	39.03	P/E RATIO	15.6	16.5	16.0	RELATIVE P/E RATIO	0.89	DIV'D YLD	4.0%	VALUE LINE						
TIMELINESS	2	Lowered 6/19/15	High: 27.1	29.5	29.3	30.5	32.2	26.9	27.8	30.7	30.8	37.9	48.3	49.5		Target Price Range					
SAFETY	2	Lowered 1/5/01	Low: 22.9	25.0	25.2	24.8	19.5	18.1	21.7	23.7	27.5	29.5	34.6	37.3		2018 2019 2020					
TECHNICAL	2	Raised 9/18/15	LEGENDS																		
BETA	.80	(1.00 = Market)	1.00 x Dividends p sh divided by Interest Rate																		
2018-20 PROJECTIONS																					
Price Gain Ann'l Total																					
High Low 55 40 (+40%) 12%																					
Low 40 (Nil) 5%																					
Insider Decisions																					
to Buy 0 0 0 0 0 0 0 0 1																					
Options to Sell 0 0 0 0 0 0 0 0 0																					
Institutional Decisions																					
4Q2014 1Q2015 2Q2015																					
to Buy 139 132 140																					
to Sell 108 129 109																					
Hld's(000) 49101 50204 51288																					
Percent shares traded																					
12 8 4																					
Vectren was formed on March 31, 2000 through the merger of Indiana Energy and SIGCORP. The merger was consummated with a tax-free exchange of shares and has been accounted for as a pooling of interests. Indiana Energy common stockholders received one Vectren common share for each share held. SIGCORP stockholders exchanged each common share for 1.333 common shares of Vectren.																					
CAPITAL STRUCTURE as of 6/30/15																					
Total Debt \$1668.9 mill. Due in 5 Yrs \$550.0 mill.																					
LT Debt \$1484.5 mill. LT Interest \$75.0 mill.																					
(LT interest earned: 4.5x)																					
Pension Assets-12/14 \$305.6 mill.																					
Oblig. \$371.9 mill.																					
Pfd Stock None																					
Common Stock 82,663,908 shs. as of 7/31/15																					
MARKET CAP: \$3.2 billion (Mid Cap)																					
ELECTRIC OPERATING STATISTICS																					
2012 2013 2014																					
% Change Retail Sales (KWH)																					
-2.3 +3 +2.0																					
Avg. Indust. Use (MWH)																					
NA NA NA																					
Avg. Indust. Revs. per KWH (¢)																					
NA NA NA																					
Capacity at Peak (Mw)																					
1494 1384 1407																					
Peak Load, Summer (Mw)																					
1259 1102 1095																					
Annual Load Factor (%)																					
NA NA NA																					
% Change Customers (yr-end)																					
+4 +6 +6																					
Fixed Charge Cov. (%)																					
367 380 363																					
ANNUAL RATES of change (per sh)																					
Past 10 Yrs. Past 5 Yrs. Est'd '12-'14 to '18-'20																					
Revenues 2.5% .5% 4.0%																					
"Cash Flow" 4.5% 4.0% 7.5%																					
Earnings 2.0% 1.5% 9.5%																					
Dividends 2.5% 2.0% 4.0%																					
Book Value 3.0% 2.5% 2.5%																					
QUARTERLY REVENUES (\$mill.)																					
Cal-endar Mar.31 Jun. 30 Sep. 30 Dec. 31 Full Year																					
2012 604.6 470.6 513.5 644.1 2232.8																					
2013 700.6 531.0 579.6 680.0 2491.2																					
2014 796.8 542.5 595.6 676.8 2611.7																					
2015 706.2 551.0 610 707.8 2575																					
2016 740 560 645 730 2675																					
EARNINGS PER SHARE ^																					
Cal-endar Mar.31 Jun. 30 Sep. 30 Dec. 31 Full Year																					
2012 .62 .31 .48 .53 1.94																					
2013 .61 d.07 .52 .60 1.66																					
2014 .62 .14 .57 .68 2.02																					
2015 .69 .43 .61 .72 2.45																					
2016 .74 .46 .67 .78 2.65																					
QUARTERLY DIVIDENDS PAID ^																					
Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year																					
2011 .345 .345 .345 .350 1.39																					
2012 .350 .350 .350 .355 1.41																					
2013 .355 .355 .355 .360 1.43																					
2014 .360 .360 .360 .380 1.46																					
2015 .380 .380 .380 .380 1.46																					
BUSINESS: Vectren is a holding company formed through the merger of Indiana Energy and SIGCORP. Supplies electricity and gas to an area nearly two-thirds of the state of Indiana. Owns gas distribution assets in Ohio. Has a customer base exceeding 1.1 million. 2014 Electricity revenues: residential, 37%; commercial, 27%; industrial, 35%; other, 1%. 2014 Gas revenues: residential, 67%; commercial, 28%; other, 5%. Nonutility operations include Infrastructure Services and Energy Services. Est'd plant age: electric, 8 years. '14 depreciation rate: 4.8%. Has 5,500 employees. Chairman, President, & CEO: Carl Chapman. Incorporated: Indiana. Address: One Vectren Square, Evansville, Indiana 47708. Telephone: 812-491-4000. Internet: www.vectren.com.																					
Vectren continues to report healthy bottom-line performance. In the June quarter, share net of \$0.43 marked a considerable improvement from the prior-year tally. Revenues increased modestly, as solid growth from the company's nonutility operations more than offset slightly lower revenues at the utility businesses. Profitability also benefited from lower operating expenses. Even so, the shares have traded lower since the beginning of the year. We think this has largely been due to the rich valuation the stock had commanded prior to the selloff. Weakness in the broader equity markets has also been a factor. We anticipate favorable comparisons in the coming quarters. Vectren's non-utility businesses should continue to report healthy performance. The infrastructure services unit is experiencing healthy demand as utilities, municipalities, and pipeline operators replace aging natural gas and oil pipelines and related infrastructure. Weakness in energy prices has resulted in a reduction of oil production. Pipelines are still being built for producing wells, so the demand for this work remains strong at this time.																					
This would likely change for the worse should energy prices remain relatively low for an extended period. Still, we think long-run fundamentals are positive here, and that operators will construct new pipelines as the pricing environment improves. Meanwhile, the energy services line ought to capitalize on a greater national emphasis on energy conservation, renewable power, and sustainability. Expected activity in the federal sector, as well as demand from the public sector and for sustainable infrastructure, has contributed to an increase in backlog for this business. Elsewhere, long-run prospects for the utility group appear attractive. In particular, the gas utility business should further benefit from modest customer growth, greater usage, and returns on infrastructure replacement programs. This stock is favorably ranked for Timeliness. Vectren earns high marks for Safety, Financial Strength, Price Stability, and Earnings Predictability. The healthy dividend yield is another plus. This good-quality issue offers decent risk-adjusted total return potential out to late decade. Michael Napoli, CFA September 18, 2015																					

XCEL ENERGY NYSE-XEL				RECENT PRICE	36.63	P/E RATIO	17.3	(Trailing: 18.6 Median: 15.0)	RELATIVE P/E RATIO	0.96	DIV'D YLD	3.7%	VALUE LINE								
TIMELINESS	3	Raised 12/27/13	High: 18.8 20.2 23.6 25.0 22.9 21.9 24.4 27.8 29.9 31.8 37.6 38.3	Low: 15.5 16.5 17.8 19.6 15.3 16.0 19.8 21.2 25.8 26.8 27.3 31.8									Target Price Range	2018	2019	2020					
SAFETY	1	Raised 5/1/15											64								
TECHNICAL	3	Raised 10/23/15											48								
BETA	.65	(1.00 = Market)											40								
2018-20 PROJECTIONS													32								
Price	40	Gain (+10%)	Ann'l Total Return										24								
High	40	Low	30										20								
Insider Decisions													16								
D	0	0	0	0									0	0	0	0	0	0	0	0	8
to Buy	0	0	0	0									0	0	0	0	0	0	0	0	6
Options to Sell	0	0	0	0									0	0	0	0	0	0	0	0	
Institutional Decisions																					
4Q2014	1Q2015	2Q2015	Percent shares traded																		
to Buy	249	214	217																		
to Sell	202	255	242																		
Hld's(000)	343268	351734	355032																		
1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC	18-20		
18.42	34.11	43.56	23.89	19.90	20.84	23.86	24.16	23.40	24.69	21.08	21.38	21.90	20.76	21.92	23.11	21.45	22.15	Revenues per sh	24.25		
4.13	4.12	5.09	3.14	3.35	3.27	3.28	3.61	3.45	3.50	3.48	3.51	3.79	4.00	4.10	4.28	4.60	4.80	"Cash Flow" per sh	5.50		
1.43	1.60	2.27	.42	1.23	1.27	1.20	1.35	1.35	1.46	1.49	1.56	1.72	1.85	1.91	2.03	2.05	2.15	Earnings per sh ^A	2.50		
1.45	1.48	1.50	1.13	.75	.81	.85	.88	.91	.94	.97	1.00	1.03	1.07	1.11	1.20	1.28	1.36	Div'd Decl'd per sh ^B	1.60		
13.87	3.63	7.40	6.04	2.49	3.19	3.25	4.00	4.89	4.66	3.91	4.60	4.53	5.27	6.82	6.33	6.65	5.45	Cap'l Spending per sh	5.50		
16.42	16.37	17.95	11.70	12.95	12.99	13.37	14.28	14.70	15.35	15.92	16.76	17.44	18.19	19.21	20.20	20.90	21.75	Book Value per sh ^C	24.25		
155.73	339.79	345.02	398.71	398.96	400.46	403.39	407.30	428.78	453.79	457.51	482.33	486.49	487.96	497.97	505.73	508.00	510.00	Common Shs Outst'g ^D	516.00		
16.6	14.3	12.4	NMF	11.6	13.6	15.4	14.8	16.7	13.7	12.7	14.1	14.2	14.8	15.0	15.4	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	14.0		
.95	.93	.64	NMF	.66	.72	.82	.80	.89	.82	.85	.90	.89	.94	.84	.81			Relative P/E Ratio	.90		
6.1%	6.4%	5.3%	6.6%	5.2%	4.7%	4.6%	4.4%	4.0%	4.7%	5.1%	4.5%	4.2%	3.9%	3.9%	3.8%			Avg Ann'l Div'd Yield	4.5%		
CAPITAL STRUCTURE as of 6/30/15																				Revenues (\$mill)	12500
Total Debt \$13054 mill. Due in 5 Yrs \$3364.7 mill.																				Net Profit (\$mill)	1270
LT Debt \$11896 mill. LT Interest \$573.8 mill.																				Income Tax Rate	35.0%
Incl. \$172.2 mill. capitalized leases.																				AFUDC % to Net Profit	6.0%
(LT interest earned: 3.3x)																				Long-Term Debt Ratio	52.0%
Leases, Uncapitalized Annual rentals \$254.5 mill.																				Common Equity Ratio	48.0%
Pension Assets-12/14 \$3083.8 mill.																				Total Capital (\$mill)	26200
Oblig. \$3476.7 mill.																				Net Plant (\$mill)	36100
Pfd Stock None																				Return on Total Cap'l	6.0%
Common Stock 507,211,342 shs.																				Return on Shr. Equity	10.0%
as of 7/27/15																				Return on Com Equity ^E	10.0%
MARKET CAP: \$19 billion (Large Cap)																				Retained to Com Eq	3.5%
ELECTRIC OPERATING STATISTICS																				All Div's to Net Prof	65%
2012 2013 2014																				BUSINESS: Xcel Energy Inc. is the parent of Northern States Power, which supplies electricity to Minnesota, Wisconsin, North Dakota, South Dakota & Michigan & gas to Minnesota, Wisconsin, North Dakota & Michigan; Public Service of Colorado, which supplies electricity & gas to Colorado; & Southwestern Public Service, which supplies electricity to Texas & New Mexico. Customers: 3.5 mill. electric, 1.9 mill. gas. Elec. rev. breakdown: residential, 32%; sm. comm'l & ind'l, 36%; lg. comm'l & ind'l, 19%; other, 13%. Generating sources not available. Fuel costs: 49% of revs. '14 reported depr. rate: 2.7%. Has 11,700 employees. Chairman, Pres. & CEO: Ben Fowke. Inc.: MN. Address: 414 Nicollet Mall, Minneapolis, MN 55401. Tel.: 612-330-5500. Internet: www.xcelenergy.com.	
% Change Retail Sales (KWH)																				million and \$5.9 million, respectively, based on a 10.2% ROE. New rates should take effect in January. In Texas, Southwestern Public Service is asking for an electric rate boost of \$42 million, based on a 10.25% ROE. A ruling is expected by yearend, retroactive to June of 2015. The utility is seeking a \$45.4 million increase in New Mexico, based on a 10.25% ROE. Finally, Northern States Power is planning to file a rate case in Minnesota (its first one since the new regulatory law was enacted).	
Large C & I Use (MWH)																				We look for just slight earnings growth this year, followed by a greater increase in 2016. The first-quarter comparison was tough, as an unusually cold winter helped the bottom line in the first period of 2014. Our 2015 estimate is within Xcel's guidance of \$2.00-\$2.15 a share. Next year, rate relief should produce earnings growth within the company's annual target of 4%-6%.	
Large C & I Revs. per KWH (¢)																				The dividend yield of Xcel stock is about average, for a utility. Total return potential to 2018-2020 is subpar, however.	
Capacity at Peak (Mw)																				Paul E. Debbas, CFA	
Peak Load, Summer (Mw)																				October 30, 2015	
Annual Load Factor (%)																					
% Change Customers (yr-end)																					
Fixed Charge Cov. (%)																					
303 321 344																					
ANNUAL RATES																					
Past 10 Yrs. Past 5 Yrs. Est'd '12-'14																					
of change (per sh)																					
Revenues																					
"Cash Flow"																					
Earnings																					
Dividends																					
Book Value																					
2.5% 7.0% 2.5% 4.5%																					
4.5% 4.5% 4.0%																					
Cal-endar																					
QUARTERLY REVENUES (\$ mill.)																					
Mar.31 Jun.30 Sep.30 Dec.31																					
2012 2013 2014 2015 2016																					
2578 2783 3203 2962 3100																					
2275 2579 2685 2515 2600																					
2724 2822 2870 2723 2800																					
2551 2731 2928 2800 2800																					
10128 10915 11686 10900 11300																					
Cal-endar																					
EARNINGS PER SHARE ^A																					
Mar.31 Jun.30 Sep.30 Dec.31																					
2012 2013 2014 2015 2016																					
.38 .48 .52 .46 .53																					
.38 .40 .39 .39 .42																					
.81 .73 .73 .80 .80																					
.29 .30 .39 .40 .40																					
1.85 1.91 2.03 2.05 2.15																					
Cal-endar																					
QUARTERLY DIVIDENDS PAID ^B																					
Mar.31 Jun.30 Sep.30 Dec.31																					
2011 2012 2013 2014 2015																					
.253 .26 .27 .28 .30																					
.253 .26 .27 .28 .30																					
.26 .27 .28 .30 .32																					
.26 .27 .28 .30 .32																					
1.03 1.06 1.10 1.10 1.18																					

CLECO CORPORATION NYSE-CNL										RECENT PRICE	53.60	P/E RATIO	24.8	21.8	15.0	RELATIVE P/E RATIO	1.42	DIV'D YLD	3.0%	VALUE LINE	Target Price Range										
TIMELINESS		— Suspended 10/31/14		High: 20.8	24.4	26.2	29.8	28.4	28.1	31.8	38.3	45.3	50.4	59.2	55.2																
SAFETY		1 Raised 6/22/12		Low: 16.2	18.9	20.5	22.1	17.3	18.7	24.3	30.1	36.2	40.4	45.5	53.0																
TECHNICAL		— Suspended 10/31/14		LEGENDS 0.88 x Dividends p sh divided by Interest Rate Relative Price Strength Options: Yes Shaded area indicates recession																											
BETA		.75 (1.00 = Market)																													
2018-20 PROJECTIONS																															
Price	50	Gain	(-5%)	Ann'l Total																											
High	40	Low	(-25%)	Return	-3%																										
Insider Decisions																															
to Buy				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
Options to Sell				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
Institutional Decisions																															
to Buy				104	107	97																									
to Sell				135	113	106																									
Hld's(000)				44848	44630	45428																									
Percent shares traded				30	20	10																									
1999				2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC										
17.12				18.23	23.55	15.33	18.54	15.03	18.41	17.38	17.19	17.99	14.17	18.98	18.53	16.46	18.14	21.01	21.30	22.30	Revenues per sh		25.25								
2.36				2.77	2.94	3.05	2.98	2.56	2.76	2.63	2.69	3.71	3.78	5.12	5.28	5.40	5.32	5.15	4.70	4.95	"Cash Flow" per sh		6.00								
1.19				1.46	1.51	1.52	1.26	1.32	1.42	1.36	1.32	1.70	1.76	2.29	2.59	2.70	2.65	2.55	2.25	2.35	Earnings per sh ^A		2.75								
.83				.85	.87	.90	.90	.90	.90	.90	.90	.90	.90	.98	1.12	1.30	1.43	1.56	1.60	1.68	Div'd Decl'd per sh ^B		1.90								
3.99				2.52	1.10	1.91	1.58	1.61	3.19	4.11	8.51	5.59	4.15	4.68	3.25	4.06	3.12	3.44	2.60	2.90	Cap'l Spending per sh		3.25								
9.44				10.04	10.69	11.77	10.09	10.83	13.69	15.22	16.85	17.65	18.50	21.76	23.55	24.84	26.24	26.93	27.60	28.30	Book Value per sh ^C		31.00								
44.88				44.99	44.96	47.04	47.18	49.62	49.99	57.57	59.94	60.04	60.26	60.53	60.29	60.36	60.45	60.42	60.50	60.50	Common Shs Outst'g ^D		60.50								
13.4				13.2	14.6	12.2	12.4	13.8	15.0	17.3	19.6	14.1	13.2	12.3	13.3	15.0	17.3	20.5	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio		16.0								
.76				.86	.75	.67	.71	.73	.80	.93	1.04	.85	.88	.78	.83	.95	.97	1.08			Relative P/E Ratio		1.00								
5.2%				4.4%	3.9%	4.8%	5.8%	5.0%	4.2%	3.8%	3.5%	3.8%	3.9%	3.5%	3.3%	3.2%	3.1%	3.0%			Avg Ann'l Div'd Yield		4.3%								
CAPITAL STRUCTURE as of 3/31/15										920.2	1000.7	1030.6	1080.2	853.8	1148.7	1117.3	993.7	1096.7	1269.5	1290	1350	Revenues (\$mill)		1525							
Total Debt \$1344.4 mill. Due in 5 Yrs \$466.2 mill.										75.0	74.7	79.6	102.1	106.3	139.5	157.8	163.6	160.7	154.7	140	145	Net Profit (\$mill)		170							
LT Debt \$1290.6 mill. LT Interest \$74.1 mill.										39.2%	36.0%	24.3%	15.3%	8.3%	44.1%	30.6%	28.5%	33.1%	30.3%	36.0%	38.5%	Income Tax Rate		38.5%							
Incl. \$4.4 million capitalized leases.										4.3%	14.2%	57.9%	82.8%	93.5%	12.2%	4.3%	5.5%	3.4%	4.5%	3.0%	3.0%	AFUDC % to Net Profit		2.0%							
(LT interest earned: 3.9x)										46.3%	40.9%	43.2%	51.1%	54.2%	51.5%	48.5%	45.6%	45.3%	45.3%	45.5%	45.0%	Long-Term Debt Ratio		43.0%							
Leases, Uncapitalized Annual rentals \$10.3 mill.										52.0%	57.8%	56.7%	48.9%	48.5%	51.5%	54.4%	54.7%	54.7%	54.5%	55.0%	Common Equity Ratio		57.0%								
Pension Assets-12/14 \$412.8 mill.										1315.9	1515.6	1780.5	2167.7	2436.4	2717.9	2756.9	2756.5	2901.7	2976.9	3070	3110	Total Capital (\$mill)		3275							
Oblig. \$498.4 mill.										1188.7	1304.9	1725.9	2045.3	2247.0	2784.2	2893.9	3009.5	3083.1	3165.5	3175	3195	Net Plant (\$mill)		3225							
Pfd Stock None										7.1%	6.3%	5.6%	6.1%	5.9%	6.6%	7.0%	7.3%	6.8%	6.4%	5.5%	6.0%	Return on Total Cap'l		6.5%							
Common Stock 60,480,586 shs.										10.6%	8.3%	7.9%	9.6%	9.5%	10.6%	11.1%	10.9%	10.1%	9.5%	8.5%	8.5%	Return on Shr. Equity		9.0%							
as of 4/20/15										10.7%	8.3%	7.8%	9.6%	9.5%	10.6%	11.1%	10.9%	10.1%	9.5%	8.5%	8.5%	Return on Com Equity ^E		9.0%							
MARKET CAP: \$3.2 billion (Mid Cap)										4.1%	3.0%	2.6%	4.5%	4.7%	6.1%	6.3%	5.7%	4.7%	3.7%	2.5%	2.5%	Retained to Com Eq		3.0%							
ELECTRIC OPERATING STATISTICS										62%	65%	68%	53%	51%	42%	43%	48%	54%	61%	70%	71%	All Div'ds to Net Prof		67%							
										BUSINESS: Cleco Corporation is a holding company for Cleco Power LLC, which supplies electricity to about 286,000 customers in central Louisiana. Electric revenue breakdown: residential, 46%; commercial, 30%; industrial, 14%; other, 10%. Largest industrial customers are paper mills and other wood-product industries. Generating sources: gas & oil, 26%; petroleum coke, 26%; coal & lignite, 23%; purchased, 25%. Fuel costs: 44% of revenues. ¹⁴ reported depreciation rate (utility): 2.7%. Has 1,200 employees. Chairman: J. Patrick Garrett. President & CEO: Bruce A. Williamson. Incorporated: Louisiana. Address: 2030 Donahue Ferry Road, P.O. Box 5000, Pineville, Louisiana 71361-5000. Telephone: 318-484-7400. Internet: www.cleco.com.																					
										Cleco Corporation needs one more regulatory approval before the takeover of the company can be completed. The transaction calls for an investor group led by Macquarie Infrastructure Partners and British Columbia Energy to pay \$55.37 in cash for each share of Cleco. Shareholders and the Federal Energy Regulatory Commission have approved the deal. Now, only the approval of the Louisiana Public Service Commission (LPSC) is required. Although the LPSC's staff needed an extension of the procedural schedule, and the acquisition is still expected to be completed by yearend. In fact, a settlement is possible. The Timeliness rank of Cleco stock remains suspended due to the takeover agreement. We continue to advise Cleco shareholders to sell their stock on the open market. The consortium's offer is very generous, at more than 24 times estimated 2015 earnings. With the recent price of Cleco just 3% below the buyout price, there is little upside potential. Although the takeover proposal has received little criticism in the utility's service area, this does not guarantee that the deal will go through. Accordingly, Cleco holders can avoid downside risk by selling their stock. Earnings are likely to wind up significantly lower this year. An extension to the utility's formula rate plan last year has hurt the bottom line due to a lowering of the allowed return on equity. Pension costs are higher, and these are not recovered in the formula rate plan. The income tax rate is higher, too. And kilowatt-hour sales to an industrial customer are down, although this is only temporary. Note that we are including merger-related expenses in our presentation. These costs reduced earnings by \$0.04 a share in the first half of 2015. We forecast higher profits in 2016. If Cleco is still a publicly traded company next year, it means the deal fell through, so it wouldn't be incurring any merger-related costs. We estimate a 4%-5% earnings increase, to \$2.35 a share. The board of directors has not raised the dividend while the transaction is pending, but we think shareholders will receive an increase in the disbursement next year if the acquisition is not completed. Paul E. Debbas, CFA September 18, 2015																					
										Company's Financial Strength										A											
										Stock's Price Stability										100											
										Price Growth Persistence										85											
										Earnings Predictability										80											

(A) Diluted earnings. Excl. nonrec. gains (losses): '00, 5¢; '02, 5¢; '03, \$2.05; '05, \$2.11; '07, \$1.22; '10, \$1.91; '11, 63¢; losses from discontinued operations: '00, 14¢; '01, 4¢.

'13 EPS don't add due to rounding. Next earnings report due early Nov. (B) Div'ds historically paid in mid-Feb., May, Aug. and Nov. ■ Div'd reinvestment plan avail. (C) Incl. deferred

charges. In '14: \$10.89/sh. (D) In mill. (E) Rate base: Net original cost. Rate allowed on com. eq. in '14: 11.24%; earned on avg. com. eq., '14: 9.6%. Regulatory Climate: Average.

Company's Financial Strength A
Stock's Price Stability 100
Price Growth Persistence 85
Earnings Predictability 80

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DUKE ENERGY NYSE-DUK				RECENT PRICE	67.37	P/E RATIO	15.0	(Trailing: 16.0 Median: NMF)	RELATIVE P/E RATIO	0.84	DIV'D YLD	5.0%	VALUE LINE				
TIMELINESS	3	Raised 11/13/15		High:	63.9	61.8	53.8	55.8	66.4	71.1	75.5	87.3	90.0	Target Price Range	2018	2019	2020
SAFETY	2	New 6/1/07		Low:	50.7	40.5	35.2	46.4	50.6	59.6	64.2	67.1	67.1				
TECHNICAL	2	Raised 11/20/15		LEGENDS — 0.56 x Dividends p sh divided by Interest Rate Relative Price Strength 1-for-3 Rev split 7/12 Options: Yes Shaded area indicates recession													
BETA	.65	(1.00 = Market)															
2018-20 PROJECTIONS				Price	95	Gain	(+40%)	Ann'l Total Return	13%								
Insider Decisions				to Buy	0	to Sell	0	Options	0	to Buy	0	to Sell	0				
Institutional Decisions				to Buy	469	to Sell	460	Options	0	to Buy	0	to Sell	0				
Duke Energy Corporation, in its current configuration, began trading on January 3, 2007, the day after it spun off its midstream gas operations into a new company, Spectra Energy (NYSE: SE). Duke Energy shareholders received half a share of Spectra Energy for each Duke share held. In July of 2012, Duke acquired Progress Energy and effected a 1-for-3 reverse split. Data for the "old" Duke are not shown because they are not comparable.				4Q2014	469	1Q2015	472	2Q2015	430								
CAPITAL STRUCTURE as of 9/30/15				to Buy	469	to Sell	460	Options	0	to Buy	0	to Sell	0				
Total Debt \$42622 mill. Due in 5 Yrs \$16675 mill.				4Q2014	469	1Q2015	472	2Q2015	430								
LT Debt \$37667 mill. LT Interest \$1725 mill.				4Q2014	469	1Q2015	472	2Q2015	430								
Incl. \$1428 mill. capitalized leases. Incl. \$1265 mill. nonrecourse LT debt of variable interest entities. (LT interest earned: 3.6x)				4Q2014	469	1Q2015	472	2Q2015	430								
Leases, Uncapitalized Annual rentals \$205 mill.				4Q2014	469	1Q2015	472	2Q2015	430								
Pension Assets-12/14 \$8498 mill.				4Q2014	469	1Q2015	472	2Q2015	430								
Oblig. \$7966 mill.				4Q2014	469	1Q2015	472	2Q2015	430								
Pfd Stock None				4Q2014	469	1Q2015	472	2Q2015	430								
Common Stock 688,334,378 shs.				4Q2014	469	1Q2015	472	2Q2015	430								
as of 11/3/15				4Q2014	469	1Q2015	472	2Q2015	430								
MARKET CAP: \$46 billion (Large Cap)				4Q2014	469	1Q2015	472	2Q2015	430								
ELECTRIC OPERATING STATISTICS				4Q2014	469	1Q2015	472	2Q2015	430								
% Change Retail Sales (KWH)				4Q2014	469	1Q2015	472	2Q2015	430								
Avg. Indust. Use (MWH)				4Q2014	469	1Q2015	472	2Q2015	430								
Avg. Indust. Revs. per KWH (¢)				4Q2014	469	1Q2015	472	2Q2015	430								
Capacity at Peak (Mw)				4Q2014	469	1Q2015	472	2Q2015	430								
Peak Load, Summer (Mw)				4Q2014	469	1Q2015	472	2Q2015	430								
Annual Load Factor (%)				4Q2014	469	1Q2015	472	2Q2015	430								
% Change Customers (avg.)				4Q2014	469	1Q2015	472	2Q2015	430								
Fixed Charge Cov. (%)				4Q2014	469	1Q2015	472	2Q2015	430								
ANNUAL RATES				4Q2014	469	1Q2015	472	2Q2015	430								
of change (per sh)				4Q2014	469	1Q2015	472	2Q2015	430								
Revenues				4Q2014	469	1Q2015	472	2Q2015	430								
"Cash Flow"				4Q2014	469	1Q2015	472	2Q2015	430								
Earnings				4Q2014	469	1Q2015	472	2Q2015	430								
Dividends				4Q2014	469	1Q2015	472	2Q2015	430								
Book Value				4Q2014	469	1Q2015	472	2Q2015	430								
QUARTERLY REVENUES (\$ mill.)				4Q2014	469	1Q2015	472	2Q2015	430								
Cal-endar				4Q2014	469	1Q2015	472	2Q2015	430								
2012				4Q2014	469	1Q2015	472	2Q2015	430								
2013				4Q2014	469	1Q2015	472	2Q2015	430								
2014				4Q2014	469	1Q2015	472	2Q2015	430								
2015				4Q2014	469	1Q2015	472	2Q2015	430								
2016				4Q2014	469	1Q2015	472	2Q2015	430								
EARNINGS PER SHARE A				4Q2014	469	1Q2015	472	2Q2015	430								
Cal-endar				4Q2014	469	1Q2015	472	2Q2015	430								
2012				4Q2014	469	1Q2015	472	2Q2015	430								
2013				4Q2014	469	1Q2015	472	2Q2015	430								
2014				4Q2014	469	1Q2015	472	2Q2015	430								
2015				4Q2014	469	1Q2015	472	2Q2015	430								
2016				4Q2014	469	1Q2015	472	2Q2015	430								
QUARTERLY DIVIDENDS PAID B				4Q2014	469	1Q2015	472	2Q2015	430								
Cal-endar				4Q2014	469	1Q2015	472	2Q2015	430								
2011				4Q2014	469	1Q2015	472	2Q2015	430								
2012				4Q2014	469	1Q2015	472	2Q2015	430								
2013				4Q2014	469	1Q2015	472	2Q2015	430								
2014				4Q2014	469	1Q2015	472	2Q2015	430								
2015				4Q2014	469	1Q2015	472	2Q2015	430								
2016				4Q2014	469	1Q2015	472	2Q2015	430								

(A) Dil. EPS. Excl. nonrec. losses: '12, 70¢; '13, 24¢; '14, 67¢; gains (loss) on disc. ops.: '12, 6¢; '13, 2¢; '14, (80¢); '15, 5¢. '12 & '13 EPS don't add due to chng. in shs. or rounding.

Next egs. report due mid-Feb. (B) Div'ds paid mid-Mar., June, Sept., & Dec. Div'd reinv. plan avail. (C) Incl. intang. In '14: \$38.94/sh. (D) In mill., adj. for rev. split. (E) Rate base: Net

orig. cost. Rates all'd on com. eq. in '13 in NC/SC: 10.2%; in '09 in OH: 10.63%; in '04 in IN: 10.3%; earned on avg. com. eq., '14: 7.0%. Reg. Climate: NC Avg.; SC, OH, IN Above Avg.

Company's Financial Strength A
Stock's Price Stability 100
Price Growth Persistence 50
Earnings Predictability 80

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BUSINESS: Duke Energy Corporation is a holding company for utilities with 7.1 mill. elec. customers in North Carolina, Florida, Indiana, South Carolina, Ohio, & Kentucky, and over 500,000 gas customers in Ohio & Kentucky. Owns independent power plants & has international ops. Acq'd Cinergy 4/06; spun off midstream gas ops. 1/07; acq'd Progress Energy 7/12. Elec. rev. breakdown: residen-

tial, 44%; commercial, 30%; industrial, 15%; other, 11%. Generating sources: coal, 37%; nuclear, 28%; gas, 21%; other, 1%; purchased, 13%. Fuel costs: 35% of revs. '14 reported deprec. rates: 2.4%-3.3%. Has 28,300 empls. Chairman: Ann Gray. Pres. & CEO: Lynn J. Good. Inc.: DE. Address: 550 South Tryon St., Charlotte, NC 28202-1803. Tel.: 704-382-3853. Web: www.duke-energy.com.

Duke Energy plans to buy Piedmont Natural Gas. Duke has agreed to pay \$4.9 billion in cash for Piedmont, which has one million gas customers in the Carolinas and Tennessee. The transaction requires the approval of Piedmont stockholders and the North Carolina commission. It does not need formal approval in South Carolina and Tennessee, but the companies "will work collaboratively with each state regulator." Duke will finance the purchase with debt, \$500 million-\$750 million of equity, and cash on hand. The companies are targeting year-end 2016 for completion of the deal. Duke expects the purchase to be accretive to share earnings beginning in 2017. Once the transaction is completed, the company will obtain more than 90% of its income from regulated activities.

Duke is adding generating capacity. The company acquired 700 megawatts of regulated generating assets in North Carolina earlier this year for \$1.25 billion. This should boost share net by \$0.07-\$0.08 annually beginning in 2016. Duke has begun construction on a project that will provide 650 mw of gas-fired capacity in South

Carolina at a cost of \$600 million. The utility will soon begin work on a 1,685-mw gas-fired facility in Florida that is expected to cost \$1.5 billion. In the western Carolinas, Duke will replace coal-fired capacity with two gas-fired units at a cost of \$1.1 billion. These investments will increase the company's earning power in the coming years.

Profitability from the international division is down. Duke's hydro operations have been hurt by a drought in Brazil. The weak economy there and unfavorable currency swings are other negative factors. This segment is likely to contribute just \$0.30 a share to profits in 2015, about half of what it earned in each of the two previous years. Our lowered expectation for this business is a key reason why we reduced our share-net estimates by \$0.15 in 2015 and 2016.

This stock has a dividend yield that is about one percentage point above the industry average. We project moderate dividend growth potential through the 3- to 5-year period, so total return potential is also above average for a utility.

Paul E. Debbas, CFA November 20, 2015

PPL CORPORATION NYSE-PPL										RECENT PRICE	33.28	P/E RATIO	14.7 (Trailing: 12.8 Median: 14.0)	RELATIVE P/E RATIO	0.83	DIV'D YLD	4.6%	VALUE LINE					
TIMELINESS — Suspended 5/22/15										High: 27.1	33.7	37.3	54.6	55.2	34.4	33.1	30.3	30.2	33.6	38.1	36.7	Target Price Range 2018 2019 2020	
SAFETY 2 Raised 8/21/15										Low: 19.9	25.5	27.8	34.4	26.8	24.3	23.8	24.1	26.7	28.4	29.4	29.2		120
TECHNICAL — Suspended 5/22/15										LEGENDS 0.86 x Dividends p sh divided by Interest Rate Relative Price Strength 2-for-1 split 8/05 Options: Yes Shaded area indicates recession										80			
BETA .70 (1.00 = Market)																				64			
2018-20 PROJECTIONS																				48			
Price 40																				32			
Gain (+20%)																				24			
Ann'l Total Return 9%																				20			
Low 30																				16			
High 40																				12			
Insider Decisions																				8			
D J F M A M J J A																							
to Buy 0 0 0 0 0 0 0 0																							
Options 0 9 2 0 0 0 1 0																							
to Sell 0 4 1 0 0 0 1 0																							
Institutional Decisions																							
4Q2014 1Q2015 2Q2015																							
to Buy 345 354 279																							
to Sell 258 301 338																							
Hld's(000) 457614 464014 464522																							
Percent shares traded																							
18																							
12																							
6																							

(A) Dil. EPS. Excl. nonrec. gain (losses): '07, (12¢); '10, (8¢); '11, 8¢; '13, (62¢); gains (losses) on disc. ops.: '07, 19¢; '08, 3¢; '09, (10¢); '10, (4¢); '12, (1¢); '14, 23¢; '15, (\$1.36).

'13 EPS don't add due to chg. in shs., '14 due to rounding. Next egs. report due early Feb. (B) Div'ds histor. pd. in early Jan., Apr., July, & Oct. Div'd reinv. plan avail. (C) Incl. intang. In

'14: \$9.75/sh. (D) In mill., adj. for split. (E) Rate base: Fair value. Rate all'd on com. eq. in PA in '13: 10.4%; in KY in '15: none spec.; earned on avg. com. eq., '14: 12.2%. Reg. Clim.: Avg.

Company's Financial Strength B++
Stock's Price Stability 100
Price Growth Persistence 10
Earnings Predictability 60

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SOUTHERN COMPANY NYSE-SO					RECENT PRICE	44.44	P/E RATIO	15.2 (Trailing: 15.9 Median: 16.0)	RELATIVE P/E RATIO	0.85	DIV'D YLD	5.0%	VALUE LINE	Target Price Range				
TIMELINESS	3	Raised 10/9/15	High: 34.0	36.5	37.4	39.3	40.6	37.6	38.6	46.7	48.6	48.7	51.3	53.2				
SAFETY	2	Lowered 2/21/14	Low: 27.4	31.1	30.5	33.2	29.8	26.5	30.8	35.7	41.8	40.0	40.3	41.4				
TECHNICAL	2	Raised 11/20/15	LEGENDS 0.70 x Dividends p sh divided by Interest Rate Relative Price Strength Options: Yes Shaded area indicates recession															
BETA	.60	(1.00 = Market)																
2018-20 PROJECTIONS																		
Price		Gain	Ann'l Total Return															
High	55	(+25%)		10%														
Low	40	(-10%)		3%														
Insider Decisions																		
D J F M A M J J A																		
to Buy																		
Options																		
to Sell																		
Institutional Decisions																		
4Q2014																		
to Buy																		
to Sell																		
Hld's(000)																		
Percent shares traded																		
18																		
12																		
6																		
© VALUE LINE PUB. LLC																		
18-20																		
17.40																		
4.17																		
1.83																		
1.34																		
3.85																		
13.82																		
665.80																		
14.3																		
.82																		
5.1%																		
CAPITAL STRUCTURE as of 6/30/15																		
Total Debt \$27374 mill. Due in 5 Yrs \$10442 mill.																		
LT Debt \$22674 mill. LT Interest \$827 mill.																		
(LT interest earned: 5.2x)																		
Leases, Uncapitalized Annual rentals \$100 mill.																		
Pension Assets-12/14 \$9690 mill. Ob \$10909 mill.																		
Pfd Stock \$940 mill. Pfd Div'd \$44 mill.																		
Incl. 1 mill. shs. 4.2%-5.44% cum. pfd. (\$100 par);																		
1.52 mill. shs. 5.2%-5.83% cum. pfd. (\$1 par); 2																		
mill. shs. 6.0% noncum. pfd. (\$25 par); 4 mill. shs.																		
5.6%-6.5% noncum. pfd. (\$100 par); 8 mill. shs.																		
5.63%-6.5% noncum. pfd. (\$1 par).																		
Common Stock 908,424,808 shs.																		
MARKET CAP: \$40 billion (Large Cap)																		
ELECTRIC OPERATING STATISTICS																		
2012																		
2013																		
2014																		
% Change Retail Sales (KWH)																		
Avg. Indust. Use (MWH)																		
Avg. Indust. Revs. per KWH (¢)																		
Capacity at Yearend (MW)																		
Peak Load, Summer (MW)																		
Annual Load Factor (%)																		
% Change Customers (yr-end)																		
Fixed Charge Cov. (%)																		
ANNUAL RATES																		
of change (per sh)																		
Revenues																		
"Cash Flow"																		
Earnings																		
Dividends																		
Book Value																		
Cal-endar																		
2012																		
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2015																		
2016																		

BUSINESS: The Southern Company, through its subsidiaries, supplies electricity to 4.5 million customers in about 120,000 square miles of Georgia, Alabama, Florida, and Mississippi. Also has competitive generation business. Electric revenue breakdown: residential, 37%; commercial, 31%; industrial, 19%; other, 13%. Retail revenues by state: Georgia, 51%; Alabama, 33%; Florida, 9%; Mississippi, 7%. Generating sources: coal, 39%; oil & gas, 37%; nuclear, 15%; hydro, 3%; purchased, 6%. Fuel costs: 36% of revenues. '14 reported deprec. rate (utility): 3.1%. Has 26,400 employees. Chairman, President and CEO: Thomas A. Fanning, Inc.: Delaware. Address: 30 Ivan Allen Jr. Blvd., N.W., Atlanta, Georgia 30308. Tel.: 404-506-5000. Internet: www.southerncompany.com.

Southern Company has agreed to acquire AGL Resources. Southern would pay \$7.9 billion in cash for AGL, which owns gas utilities serving 4.5 million customers in seven states. The transaction requires the approval of AGL shareholders and the commissions in Georgia, Illinois, Virginia, New Jersey, and Maryland. The companies expect the deal to be completed in the second half of 2016. Southern is paying more than 20 times estimated 2016 earnings, but management expects the takeover to be accretive to share profits in the first full year after closing and increase its long-term earnings growth rate from 3%-4% to 4%-5%. Southern also expects the addition of AGL to benefit it as it increases its use of natural gas. The company expects to finance the purchase with a combination of debt and equity. Our figures will not include AGL until after the acquisition is completed, but will include merger-related expenses.

Mississippi Power took another charge related to the coal gasification plant it is building. The project has had extensive delays and cost overruns, and is now expected to be completed in the second quarter of 2016. The latest charge was \$93 million after taxes (\$0.11 a share). The utility is also seeking an interim rate increase of \$159 million (18%), based on a 9.7% return on a 50% common-equity ratio.

Georgia Power, which is building two nuclear units, has settled litigation about delays and cost overruns. Disputes among contractors were a problem, so one company, Westinghouse, will now assume responsibility. Georgia Power will pay for \$349 million of the overruns. The units are expected to begin commercial operation in June of 2019 and June of 2020.

We have raised our 2015 earnings estimate by a nickel a share. Southern is benefiting from the solid economy in its service area and income from its increased investment at its Southern Power non-utility subsidiary. The same factors should produce 3%-4% profit growth in 2016.

This stock has a high dividend yield, even for a utility. The yield is more than a percentage point above the industry average. Total return potential to 2018-2020 is unspectacular, however.

Paul E. Debbas, CFA November 20, 2015

(A) Diluted EPS. Excl. nonrec. gain (losses): '03, 6¢; '09, (25¢); '13, (83¢); '14, (59¢); '15, (13¢). '14 EPS don't add due to rounding. Next earnings report due late Jan. (B) Div'ds histori-

cally paid in early Mar., June, Sept., and Dec. Div'd reinvest. plan avail. † Shareholder invest. plan avail. (C) Incl. def'd charges. In '14: \$7.92/sh. (D) In mill. (E) Rate base: AL, MS,

fair value; FL, GA, orig. cost. All'd return on com. eq. (blended): 12.5%; earn. on avg. com. eq., '14: 12.7%. Reg. Clim.: GA, AL Above Avg.; MS, FL Avg. (F) Winter peak in '14.

Company's Financial Strength A
Stock's Price Stability 100
Price Growth Persistence 40
Earnings Predictability 100

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Stock Price Data in Date Order for Yield Calculation 6/1/2015 to 11/30/2015

Dividend	ALE	LNT	CNP	ED	DTE	D	EIX	ES	IDA	MGE	NWE	OGE	OTTR	PCG	PNW	POR	PEG	VVC	XEL
	2.02	2.20	0.99	2.60	2.92	2.59	1.67	1.67	2.04	1.18	1.92	1.10	1.23	1.82	2.50	1.20	1.56	1.60	1.28
								1.88 thru Aug				1.00 thru Aug			2.38 thru Oct			1.52 thru Oct	
11/30/2015	50.95	60.19	16.95	62.15	80.49	67.37	59.36	50.95	68.04	43.47	54.53	26.11	26.63	52.73	63.36	36.92	38.71	42.57	35.66
11/27/2015	51.15	59.88	17.00	62.21	80.17	67.37	59.43	50.53	67.39	42.65	54.35	25.94	26.57	52.77	62.95	36.70	38.73	42.24	35.64
11/25/2015	50.82	59.71	17.08	62.03	79.88	67.22	59.18	50.36	66.82	42.55	54.13	25.87	26.46	52.36	62.68	36.62	38.59	42.27	35.50
11/24/2015	51.00	60.09	17.06	62.35	80.21	67.48	59.70	50.65	66.77	42.99	54.12	25.78	26.52	52.55	63.06	36.77	38.79	42.15	35.73
11/23/2015	51.31	60.25	17.00	62.82	80.53	67.58	60.10	51.13	66.71	43.03	54.07	25.91	26.47	52.73	62.87	36.59	39.10	41.81	35.57
11/20/2015	51.80	61.08	17.09	63.31	81.38	68.35	60.58	51.44	67.39	43.15	53.99	26.06	26.55	53.58	63.34	37.02	39.27	42.01	35.86
11/19/2015	51.40	60.45	17.10	63.19	80.93	68.17	60.30	51.04	66.93	42.72	53.50	26.28	26.15	53.19	62.87	36.66	39.12	41.52	35.72
11/18/2015	50.80	59.30	17.16	62.80	79.88	67.84	59.30	50.60	65.48	42.36	52.94	26.03	26.10	52.67	62.14	35.95	38.59	41.06	35.62
11/17/2015	51.15	58.98	17.07	62.46	79.55	67.66	59.05	49.65	64.93	41.77	52.73	25.89	25.85	52.15	61.85	35.28	38.62	40.83	35.22
11/16/2015	51.50	59.98	17.23	62.72	81.06	68.61	60.25	50.97	66.28	42.64	53.63	26.56	26.26	53.44	62.93	35.92	39.48	41.66	35.59
11/13/2015	50.25	58.49	16.96	61.26	79.53	67.56	59.70	49.80	65.08	41.55	52.65	25.78	26.01	52.26	61.58	35.03	38.67	40.81	35.01
11/12/2015	50.63	58.43	16.91	61.88	80.03	67.27	60.05	50.23	65.89	41.54	53.03	26.11	26.14	52.79	62.08	35.35	38.59	41.32	35.31
11/11/2015	51.73	58.83	17.33	62.26	81.00	67.67	60.77	51.07	67.15	42.35	54.42	26.61	26.30	53.67	63.33	36.10	38.75	42.02	36.05
11/10/2015	50.81	58.15	17.13	62.01	80.20	67.16	60.05	50.37	66.17	42.45	53.83	26.41	26.51	53.37	63.24	35.85	38.52	42.10	35.58
11/9/2015	49.93	56.81	17.25	61.28	79.30	67.09	59.25	49.35	65.61	41.30	52.94	26.13	26.03	52.50	62.00	35.60	38.38	41.62	35.01
11/6/2015	49.62	56.99	17.21	61.30	79.39	67.21	59.06	49.02	65.11	41.10	52.40	26.07	26.22	51.93	61.54	35.46	38.27	41.72	34.86
11/5/2015	51.30	60.03	18.25	64.66	83.00	69.58	60.18	51.50	67.16	41.52	54.55	27.48	26.44	53.72	64.71	37.14	40.28	44.95	36.11
11/4/2015	51.33	60.11	18.42	65.23	82.71	69.91	60.81	51.59	66.94	41.50	54.84	28.41	26.42	54.16	65.19	37.29	40.68	45.52	36.03
11/3/2015	50.80	59.72	18.46	64.95	82.46	70.05	60.62	51.45	66.75	41.17	54.50	28.41	26.11	53.63	63.97	36.94	40.61	45.47	35.89
11/2/2015	49.96	59.54	18.24	64.90	82.16	70.07	60.89	50.96	66.53	41.19	53.93	28.20	27.35	53.55	64.17	36.79	40.21	44.79	35.85
10/30/2015	49.72	59.02	18.29	65.06	81.59	70.76	60.52	50.94	66.34	40.99	54.19	28.51	27.12	53.40	63.51	37.08	40.87	45.04	35.63
10/29/2015	49.42	58.67	18.27	64.65	81.15	70.21	60.64	50.76	65.93	40.99	54.11	28.48	27.46	52.35	63.17	36.96	41.02	44.80	35.54
10/28/2015	49.84	59.30	18.27	65.71	82.17	70.85	61.23	50.97	67.60	41.72	54.97	28.43	27.61	52.95	63.86	37.41	40.97	45.24	36.04
10/27/2015	50.59	59.83	18.33	66.54	83.49	71.68	64.38	51.93	69.18	41.63	55.63	28.41	27.32	54.07	64.88	38.23	41.36	45.64	36.72
10/26/2015	49.85	60.04	18.50	66.34	83.50	72.16	65.05	52.05	69.36	42.03	55.89	28.71	27.79	53.79	65.14	38.61	41.42	46.18	36.78

Stock Price Data in Date Order for Yield Calculation 6/1/2015 to 11/30/2015

10/23/2015	49.48	59.81	18.36	66.34	83.33	72.39	64.55	51.72	68.41	41.88	55.72	28.79	28.00	53.63	65.07	38.31	42.23	45.56	36.44
10/22/2015	50.51	60.98	18.86	67.07	84.87	73.79	66.09	52.70	69.47	42.32	55.99	29.24	28.22	54.50	65.99	38.89	43.18	46.35	37.14
10/21/2015	50.51	60.27	18.50	66.27	83.78	73.23	65.02	52.06	68.52	41.56	56.27	28.82	27.80	54.17	64.95	38.46	42.74	45.56	36.58
10/20/2015	51.10	60.64	18.33	66.45	83.82	73.00	65.45	52.20	68.48	42.17	56.86	28.92	27.92	54.33	65.10	38.68	43.12	45.54	36.63
10/19/2015	51.00	60.43	18.22	66.23	83.64	72.68	64.98	51.98	68.25	41.86	56.36	28.88	27.48	54.29	64.89	38.49	43.45	45.17	36.26
10/16/2015	52.26	60.17	18.43	66.32	83.35	72.45	64.28	52.24	67.77	42.10	56.20	28.85	27.65	54.03	65.21	38.44	43.03	44.43	36.43
10/15/2015	51.64	59.98	18.40	65.77	83.26	72.12	64.43	51.83	68.81	42.17	55.98	28.85	27.69	54.05	65.14	38.30	42.90	43.96	36.35
10/14/2015	51.01	58.99	18.00	64.79	81.76	71.41	63.82	51.25	67.21	41.40	55.01	28.52	26.98	52.77	64.34	37.76	42.24	43.25	35.99
10/13/2015	51.18	58.86	18.13	64.85	81.35	71.22	63.56	50.95	67.09	41.55	55.02	28.42	27.08	52.74	64.08	37.68	42.10	43.27	35.89
10/12/2015	51.28	58.83	18.28	65.08	81.60	71.32	63.59	51.18	66.84	41.63	55.35	28.39	27.20	53.00	63.99	37.75	42.27	43.13	35.84
10/9/2015	50.88	58.19	18.41	64.74	81.14	70.35	63.14	50.63	65.62	41.04	54.75	28.41	27.18	52.50	63.36	37.40	41.87	42.77	35.26
10/8/2015	51.35	58.40	18.47	65.57	81.37	70.05	63.72	51.07	65.32	41.10	55.09	28.38	27.21	53.09	63.44	37.33	42.47	42.75	35.51
10/7/2015	50.28	57.69	18.31	64.72	80.36	69.12	62.94	50.42	64.21	40.19	53.92	27.91	26.88	52.73	62.30	36.76	41.90	41.98	35.03
10/6/2015	49.99	57.94	18.23	64.96	80.72	69.12	63.04	50.64	64.09	40.02	54.05	27.69	26.21	53.11	62.32	36.89	42.45	41.81	35.04
10/5/2015	50.44	58.42	18.29	66.38	81.12	69.66	63.68	51.10	64.65	40.81	54.66	27.74	26.49	53.46	63.46	37.39	42.30	42.21	35.51
10/2/2015	49.74	57.84	17.77	65.94	80.60	68.70	63.12	50.51	64.14	40.00	54.20	27.46	25.67	53.00	63.30	36.95	41.92	41.95	35.33
10/1/2015	49.43	57.07	17.52	64.94	79.37	68.51	62.18	49.92	63.28	39.92	53.73	26.79	25.37	52.58	62.83	36.42	40.92	41.24	35.01
9/30/2015	50.49	58.49	17.78	66.15	80.37	69.72	63.07	50.62	64.22	41.19	53.83	27.36	25.76	52.80	64.14	36.97	42.16	42.01	35.41
9/29/2015	49.32	57.74	17.28	65.21	78.23	68.64	61.79	49.30	63.23	41.07	53.14	26.54	25.54	52.01	63.22	36.14	40.91	41.07	34.70
9/28/2015	50.13	58.04	17.29	65.13	78.77	68.78	61.63	49.09	63.14	41.61	53.25	26.73	25.79	52.01	63.17	36.39	40.59	40.88	34.64
9/25/2015	50.20	57.98	17.64	65.56	79.27	69.40	61.91	48.89	63.15	41.25	53.00	27.07	25.86	52.46	63.52	36.51	40.89	40.88	34.91
9/24/2015	49.43	57.36	17.57	65.26	78.76	68.77	61.40	48.17	62.77	41.16	52.26	27.03	25.72	51.99	62.63	36.06	40.15	40.71	34.40
9/23/2015	48.73	56.78	17.50	64.84	78.33	68.57	60.67	47.72	61.23	40.16	51.23	26.77	25.30	51.55	62.23	35.70	39.94	40.37	34.11
9/22/2015	48.22	56.70	17.57	64.31	77.27	68.43	60.44	47.47	60.76	39.71	51.08	26.80	25.12	51.01	62.20	35.31	39.67	40.45	33.92
9/21/2015	48.49	57.15	17.93	64.35	77.98	68.67	61.20	47.51	60.95	40.24	51.40	27.34	25.55	50.74	62.29	35.55	40.61	40.45	34.11
9/18/2015	48.32	56.75	17.79	64.37	77.80	68.35	60.88	47.22	60.88	40.01	50.80	27.22	25.58	50.10	61.77	35.21	40.34	40.31	33.63
9/17/2015	48.83	57.08	18.02	63.83	78.15	68.81	60.69	47.66	60.29	40.31	51.09	27.64	25.62	49.66	61.77	35.13	40.60	40.30	33.84
9/16/2015	48.49	56.21	17.88	62.88	76.90	68.10	59.31	46.71	59.55	39.80	50.40	27.50	25.53	48.86	61.09	34.65	40.15	39.73	33.36
9/15/2015	48.05	55.60	17.62	62.00	75.78	67.44	58.76	46.70	58.30	39.56	50.01	27.07	25.21	48.38	60.18	34.46	39.59	39.19	33.11
9/14/2015	47.98	55.40	17.56	61.98	75.17	67.47	57.83	46.25	58.55	39.87	49.88	26.85	24.99	48.07	59.88	34.37	39.30	39.06	32.84
9/11/2015	48.14	55.25	17.44	61.73	75.23	67.12	57.53	46.09	58.25	39.38	49.72	26.91	25.21	48.02	59.79	34.23	39.32	38.96	32.84

Stock Price Data in Date Order for Yield Calculation 6/1/2015 to 11/30/2015

9/10/2015	47.69	54.84	17.48	60.92	74.36	66.64	56.86	45.50	57.55	38.79	48.83	26.69	25.24	47.29	59.06	33.82	38.88	38.54	32.39
9/9/2015	47.46	55.01	17.50	60.66	74.44	67.44	56.91	45.45	57.84	38.19	49.77	26.90	25.16	47.50	59.23	33.99	38.64	38.71	32.25
9/8/2015	47.32	55.60	17.73	61.69	75.56	68.07	57.48	46.06	58.34	39.08	50.27	27.31	25.53	48.36	59.68	34.47	39.10	39.03	32.76
9/4/2015	46.38	54.55	17.36	60.22	74.30	66.60	56.67	45.32	57.16	38.10	49.51	26.70	25.00	47.19	57.60	33.44	38.36	38.39	32.32
9/3/2015	46.67	55.38	17.69	61.23	75.66	67.45	57.22	46.04	57.61	38.56	49.90	27.20	25.13	47.88	58.27	33.82	38.97	38.87	32.97
9/2/2015	46.57	55.13	17.47	61.00	75.30	67.45	57.15	45.73	57.34	38.37	49.66	26.78	25.11	47.52	58.01	33.42	38.56	38.71	32.78
9/1/2015	46.23	55.12	17.59	60.93	75.40	67.16	56.83	45.65	57.17	38.04	49.84	27.19	24.93	47.47	58.01	33.42	38.59	38.94	32.66
8/31/2015	47.78	56.67	18.36	62.91	77.33	69.09	58.09	46.81	58.92	38.46	51.14	28.04	25.51	49.15	59.53	34.25	39.85	40.23	33.40
8/28/2015	47.80	57.80	18.55	63.60	78.09	70.36	59.24	47.85	59.73	38.60	51.82	28.43	25.52	49.99	60.48	34.68	40.12	40.97	33.62
8/27/2015	47.61	57.73	18.48	63.90	78.23	70.54	59.47	48.15	60.01	38.25	51.99	28.54	25.38	49.91	60.78	34.83	40.53	41.08	33.67
8/26/2015	47.41	56.66	17.97	63.48	77.14	69.96	58.31	47.64	59.35	37.53	51.82	27.63	25.47	49.01	60.33	34.43	39.87	40.60	33.22
8/25/2015	46.64	56.10	17.67	62.20	75.84	68.93	57.10	46.82	58.39	36.72	50.99	27.45	24.61	48.54	59.61	33.87	39.49	40.76	32.76
8/24/2015	48.46	58.04	18.23	63.37	78.48	71.02	59.28	48.47	60.12	37.74	52.65	28.45	25.23	49.98	61.69	34.75	40.25	41.01	33.77
8/21/2015	50.65	60.73	19.04	66.06	82.37	74.00	61.72	50.57	62.69	38.94	54.20	29.92	26.39	52.62	63.27	36.42	41.62	41.95	35.22
8/20/2015	51.42	61.84	19.54	66.82	83.48	74.32	61.33	51.15	63.23	38.64	54.73	30.45	26.66	53.42	64.34	36.73	42.77	42.22	35.66
8/19/2015	51.69	62.49	19.62	66.87	83.59	74.73	61.52	51.21	63.47	39.26	55.00	30.95	26.95	53.66	64.59	37.04	43.05	42.58	35.97
8/18/2015	51.55	62.33	19.63	66.51	82.81	74.68	60.82	51.00	63.40	39.51	55.19	31.07	27.00	53.94	64.38	37.11	42.60	42.54	35.56
8/17/2015	51.93	62.92	19.64	66.71	83.33	74.81	61.33	51.14	63.88	40.02	55.77	31.45	27.44	53.80	64.85	37.45	42.72	42.92	35.64
8/14/2015	51.68	61.74	19.64	66.67	82.86	73.97	60.73	50.71	63.21	39.83	55.59	31.01	27.49	53.62	64.37	37.30	42.48	42.61	35.45
8/13/2015	51.17	61.52	19.36	66.27	82.36	73.54	60.18	50.33	62.85	39.32	54.88	30.70	27.27	52.90	63.86	36.94	41.89	42.08	35.22
8/12/2015	50.98	61.32	19.31	65.96	82.24	73.11	60.28	50.45	62.59	39.68	54.88	30.80	27.62	52.72	63.77	37.05	42.08	42.22	35.38
8/11/2015	50.59	60.65	18.84	65.21	80.40	71.33	58.60	49.95	61.98	39.21	54.17	30.38	27.56	52.18	63.08	36.48	42.05	41.73	35.03
8/10/2015	50.19	60.63	19.01	64.52	79.88	71.01	59.14	49.56	61.45	38.86	53.78	30.27	27.35	51.79	62.25	35.95	41.50	41.51	34.60
8/7/2015	50.70	60.72	18.63	64.52	80.46	71.00	60.60	49.35	61.43	39.31	53.97	29.94	27.23	52.44	62.62	35.89	42.02	41.64	34.91
8/6/2015	49.56	60.63	18.57	63.10	79.14	70.01	60.19	49.08	60.56	39.38	53.33	29.43	27.38	51.71	61.51	35.58	41.19	41.40	34.49
8/5/2015	48.99	61.08	18.53	62.80	78.47	69.84	59.46	48.79	60.52	39.19	53.27	29.50	27.17	51.38	60.85	35.42	40.78	41.64	34.09
8/4/2015	48.32	60.80	18.35	62.63	78.35	68.95	59.27	48.65	60.15	38.65	52.73	29.35	27.36	51.54	60.80	35.35	40.24	41.35	33.82
8/3/2015	47.93	61.59	18.70	63.17	79.60	70.39	59.75	49.40	61.28	39.40	53.46	29.73	25.17	52.19	61.92	35.83	41.22	41.75	34.20
7/31/2015	47.81	61.51	18.82	62.98	79.70	70.37	59.61	49.27	61.17	39.38	53.32	29.76	25.34	52.06	61.71	35.71	41.26	41.72	34.34
7/30/2015	47.46	60.97	18.63	62.54	78.80	69.73	59.13	48.33	60.39	39.00	52.88	29.45	25.24	51.73	61.27	35.37	40.85	41.14	33.88
7/29/2015	47.38	60.42	18.57	61.74	78.56	69.34	58.68	47.85	59.55	38.94	52.53	29.10	25.23	51.89	60.93	35.20	40.28	40.78	33.40

Stock Price Data in Date Order for Yield Calculation 6/1/2015 to 11/30/2015

7/28/2015	47.53	59.99	18.38	61.30	77.88	68.83	58.49	47.68	58.78	39.07	52.18	28.81	25.18	51.83	60.50	34.47	39.90	40.66	33.27
7/27/2015	47.06	59.70	18.18	61.03	77.94	67.86	58.53	47.43	58.29	38.96	52.06	28.39	25.31	51.38	60.38	33.89	39.79	40.41	33.02
7/24/2015	45.77	58.72	17.80	60.31	76.63	67.32	57.26	46.78	57.20	38.29	50.94	27.83	24.83	49.92	59.41	33.54	39.39	39.70	32.54
7/23/2015	45.21	58.63	17.85	60.56	75.45	66.97	57.36	46.92	57.25	38.47	50.06	27.81	25.08	49.90	59.11	33.48	39.37	39.77	32.59
7/22/2015	46.48	59.52	18.12	61.60	76.41	67.46	58.01	47.39	57.74	39.04	50.18	28.09	25.71	50.88	59.76	33.89	40.36	40.35	33.08
7/21/2015	46.29	59.09	18.09	60.89	75.94	67.50	57.60	47.09	57.01	39.00	50.02	28.10	25.85	50.16	59.38	33.70	40.09	39.84	32.83
7/20/2015	46.83	59.70	18.25	60.81	76.68	68.01	57.80	47.15	57.25	39.15	50.23	28.41	26.14	50.75	60.22	33.97	40.93	40.00	33.16
7/17/2015	47.30	59.92	18.49	60.71	76.78	68.36	58.15	47.48	57.62	39.95	50.49	28.62	26.45	50.89	59.84	34.21	41.00	40.42	33.37
7/16/2015	47.62	60.78	18.72	61.12	77.80	68.88	58.74	47.86	58.11	40.33	51.04	29.28	26.76	51.82	60.58	34.77	41.47	41.00	33.79
7/15/2015	46.98	59.85	18.75	60.20	76.77	68.23	57.72	47.29	57.32	39.77	50.04	28.92	26.58	50.98	59.63	34.20	40.64	40.54	33.30
7/14/2015	47.03	59.75	18.74	59.84	76.37	67.92	57.55	46.87	57.11	39.75	50.08	28.73	26.55	50.56	59.53	34.07	40.47	40.32	33.22
7/13/2015	47.40	59.72	18.66	60.10	76.53	67.81	57.33	46.61	57.26	40.07	50.32	28.85	26.61	50.78	59.60	34.15	40.57	40.02	33.22
7/10/2015	47.59	59.54	18.61	60.22	76.78	67.68	57.56	46.46	57.19	39.93	50.17	28.76	26.52	50.68	59.74	34.07	40.85	40.03	33.23
7/9/2015	47.07	59.05	18.44	59.91	76.14	67.38	57.19	46.30	56.68	39.40	49.89	28.65	26.16	50.26	59.10	33.85	40.79	39.75	33.01
7/8/2015	47.82	59.86	18.70	60.64	77.23	68.14	57.86	46.70	58.05	39.77	50.72	28.99	26.44	50.99	59.70	34.19	40.97	40.22	33.38
7/7/2015	47.62	60.23	19.07	60.49	77.82	68.05	58.44	46.95	58.31	40.12	51.08	29.35	26.74	50.96	59.76	34.48	41.23	40.27	33.56
7/6/2015	46.83	58.56	18.70	59.02	75.75	66.59	57.21	45.89	56.96	39.31	49.98	28.87	26.44	49.60	57.92	33.77	39.93	39.32	32.62
7/2/2015	46.73	58.47	18.83	58.57	75.50	66.64	57.16	46.09	56.47	39.08	49.57	29.00	26.43	49.36	57.76	33.51	39.54	39.00	32.50
7/1/2015	46.01	57.60	18.57	57.72	74.53	65.83	56.02	45.15	55.73	38.58	48.50	28.44	26.13	48.96	57.02	33.13	39.06	38.27	32.19
6/30/2015	45.93	57.20	18.52	57.32	73.94	65.63	55.21	45.00	55.29	38.43	48.28	28.33	26.00	48.68	56.34	32.88	38.89	38.14	31.87
6/29/2015	46.35	57.02	18.74	57.57	73.94	66.04	55.31	45.09	55.56	38.88	48.55	28.45	26.23	48.91	56.03	32.89	38.83	38.55	31.86
6/26/2015	46.71	57.31	18.83	57.54	74.26	66.02	55.85	45.57	55.92	39.05	49.11	28.71	26.48	49.27	56.34	33.04	39.20	39.00	31.93
6/25/2015	46.47	56.85	18.65	56.94	73.20	65.80	55.21	45.10	55.41	38.84	48.99	28.41	26.39	48.72	55.77	32.90	38.75	38.76	31.61
6/24/2015	47.51	57.16	18.66	57.28	73.16	66.40	55.28	45.15	55.68	38.94	49.15	28.83	26.34	48.97	55.97	33.07	39.22	39.03	31.68
6/23/2015	47.93	57.59	18.82	57.51	73.66	66.31	56.82	45.43	55.82	39.06	49.38	28.99	26.65	49.55	56.69	33.30	39.77	39.62	31.92
6/22/2015	48.64	58.51	19.18	58.15	74.68	67.00	57.56	46.14	56.46	39.38	49.83	29.20	26.77	50.25	57.50	33.70	40.32	40.36	32.38
6/19/2015	48.85	58.60	19.00	58.42	74.98	66.79	57.78	46.31	56.58	39.66	50.13	29.03	26.71	50.18	57.58	33.65	40.58	40.32	32.45
6/18/2015	49.13	58.89	19.14	58.63	75.33	67.57	58.03	46.86	57.12	39.85	50.44	29.25	27.11	50.78	57.50	33.57	40.77	40.57	32.73
6/17/2015	48.39	58.06	18.87	57.68	74.27	66.74	57.17	46.52	55.96	38.60	49.83	29.05	26.54	49.90	56.75	32.93	40.09	39.93	32.26
6/16/2015	47.61	57.75	18.57	56.98	73.40	66.12	56.77	46.25	55.66	38.33	49.14	28.86	26.48	49.22	56.41	32.79	39.79	39.61	32.07
6/15/2015	47.34	57.34	18.62	56.66	73.09	65.86	56.55	45.60	55.21	37.30	49.03	28.72	26.23	48.93	56.10	32.70	39.61	39.29	31.87

Stock Price Data in Date Order for Yield Calculation 6/1/2015 to 11/30/2015

6/12/2015	47.42	57.59	18.74	56.98	73.38	65.56	56.39	45.68	55.19	37.64	49.40	28.90	26.31	49.35	56.45	32.83	39.31	39.44	32.07
6/11/2015	48.21	58.26	18.97	57.48	74.11	66.02	57.05	46.23	56.08	37.87	50.50	29.20	26.45	49.72	57.26	33.18	40.00	40.07	32.17
6/10/2015	47.89	57.51	18.87	57.19	73.64	65.61	56.61	45.76	55.56	37.35	50.58	29.00	26.39	49.54	56.54	32.93	39.84	39.60	31.73
6/9/2015	47.76	57.28	18.77	57.88	73.14	65.59	56.45	45.91	54.93	36.92	48.47	28.90	25.58	49.44	56.35	32.71	39.74	39.59	31.73
6/8/2015	48.80	57.51	18.67	57.96	73.15	65.69	56.71	45.91	55.70	36.96	48.65	29.52	25.74	49.89	56.63	33.16	39.74	39.61	31.70
6/5/2015	48.53	57.76	18.80	58.04	73.55	65.90	56.87	46.26	55.66	36.95	48.64	29.79	25.91	50.45	57.07	33.23	40.01	39.82	31.72
6/4/2015	48.94	58.52	18.78	59.11	75.26	66.62	58.01	47.01	56.52	37.03	49.50	29.71	25.85	50.93	57.90	33.81	40.12	40.49	32.13
6/3/2015	49.27	59.07	19.09	59.19	75.25	67.16	57.79	47.25	57.01	37.34	49.60	30.05	26.36	51.05	58.12	33.71	40.54	40.75	32.20
6/2/2015	49.29	59.97	19.20	60.50	76.40	68.30	58.70	48.05	57.60	37.78	50.16	30.29	26.35	51.96	59.07	33.76	41.47	41.45	32.75
6/1/2015	49.94	60.83	19.68	61.11	77.79	69.19	59.92	48.74	58.43	38.30	51.04	31.04	26.57	52.71	60.32	34.34	42.08	42.16	33.41
Avg	49.04	58.77	18.25	62.43	78.47	68.89	59.58	48.59	61.34	39.91	52.25	28.28	26.31	51.38	61.13	35.35	40.47	41.30	34.13

Stock Price Data Low-High Ranking for Yield Calculation 6/1/2015 to 11/30/2015

Dividend	ALE	LNT	CNP	ED	DTE	D	EIX	ES	IDA	MGE	NWE	OGE	OTTR	PCG	PNW	POR	PEG	VVC	XEL
	2.02	2.20	0.99	2.60	2.92	2.59	1.67	1.67	2.04 1.88 thru Aug	1.18	1.92	1.10 1.00 thru Aug	1.23	1.82	2.50 2.38 thru Oct	1.20	1.56	1.60 1.52 thru Oct	1.28
11/30/2015	49.62	56.81	16.91	61.26	79.30	67.09	59.05	49.02	64.93	41.10	52.40	25.78	25.85	51.93	61.54	35.03	38.27	40.81	34.86
11/27/2015	49.93	56.99	16.95	61.28	79.39	67.16	59.06	49.35	65.08	41.17	52.65	25.78	26.01	52.15	61.58	35.28	38.38	40.83	35.01
11/25/2015	49.96	58.15	16.96	61.30	79.53	67.21	59.18	49.65	65.11	41.19	52.73	25.87	26.03	52.26	61.85	35.35	38.52	41.06	35.01
11/24/2015	50.25	58.43	17.00	61.88	79.55	67.22	59.25	49.80	65.48	41.30	52.94	25.89	26.10	52.36	62.00	35.46	38.59	41.32	35.22
11/23/2015	50.63	58.49	17.00	62.01	79.88	67.27	59.30	50.23	65.61	41.50	52.94	25.91	26.11	52.50	62.08	35.60	38.59	41.52	35.31
11/20/2015	50.80	58.83	17.06	62.03	79.88	67.37	59.36	50.36	65.89	41.52	53.03	25.94	26.14	52.55	62.14	35.85	38.59	41.62	35.50
11/19/2015	50.80	58.98	17.07	62.15	80.03	67.37	59.43	50.37	66.17	41.54	53.50	26.03	26.15	52.67	62.68	35.92	38.62	41.66	35.57
11/18/2015	50.81	59.30	17.08	62.21	80.17	67.48	59.70	50.53	66.28	41.55	53.63	26.06	26.22	52.73	62.87	35.95	38.67	41.72	35.58
11/17/2015	50.82	59.54	17.09	62.26	80.20	67.56	59.70	50.60	66.53	41.77	53.83	26.07	26.26	52.73	62.87	36.10	38.71	41.81	35.59
11/16/2015	50.95	59.71	17.10	62.35	80.21	67.58	60.05	50.65	66.71	42.35	53.93	26.11	26.30	52.77	62.93	36.59	38.73	42.01	35.62
11/13/2015	51.00	59.72	17.13	62.46	80.49	67.66	60.05	50.95	66.75	42.36	53.99	26.11	26.42	52.79	62.95	36.62	38.75	42.02	35.64
11/12/2015	51.15	59.88	17.16	62.72	80.53	67.67	60.10	50.96	66.77	42.45	54.07	26.13	26.44	53.19	63.06	36.66	38.79	42.10	35.66
11/11/2015	51.15	59.98	17.21	62.80	80.93	67.84	60.18	50.97	66.82	42.55	54.12	26.28	26.46	53.37	63.24	36.70	39.10	42.15	35.72
11/10/2015	51.30	60.03	17.23	62.82	81.00	68.17	60.25	51.04	66.93	42.64	54.13	26.41	26.47	53.44	63.33	36.77	39.12	42.24	35.73
11/9/2015	51.31	60.09	17.25	63.19	81.06	68.35	60.30	51.07	66.94	42.65	54.35	26.56	26.51	53.55	63.34	36.79	39.27	42.27	35.85
11/6/2015	51.33	60.11	17.33	63.31	81.38	68.61	60.58	51.13	67.15	42.72	54.42	26.61	26.52	53.58	63.36	36.92	39.48	42.57	35.86
11/5/2015	51.40	60.19	18.24	64.66	82.16	69.58	60.62	51.44	67.16	42.99	54.50	27.48	26.55	53.63	63.97	36.94	40.21	44.79	35.89
11/4/2015	51.50	60.25	18.25	64.90	82.46	69.91	60.77	51.45	67.39	43.03	54.53	28.20	26.57	53.67	64.17	37.02	40.28	44.95	36.03
11/3/2015	51.73	60.45	18.42	64.95	82.71	70.05	60.81	51.50	67.39	43.15	54.55	28.41	26.63	53.72	64.71	37.14	40.61	45.47	36.05
11/2/2015	51.80	61.08	18.46	65.23	83.00	70.07	60.89	51.59	68.04	43.47	54.84	28.41	27.35	54.16	65.19	37.29	40.68	45.52	36.11
L	49.62	56.81	16.91	61.26	79.30	67.09	59.05	49.02	64.93	41.10	52.40	25.78	25.85	51.93	61.54	35.03	38.27	40.81	34.86
H	51.80	61.08	18.46	65.23	83.00	70.07	60.89	51.59	68.04	43.47	54.84	28.41	27.35	54.16	65.19	37.29	40.68	45.52	36.11
Avg	50.71	58.95	17.69	63.24	81.15	68.58	59.97	50.31	66.49	42.29	53.62	27.10	26.60	53.05	63.37	36.16	39.47	43.16	35.49
Div	2.02	2.20	0.99	2.60	2.92	2.59	1.67	1.67	2.04	1.18	1.92	1.10	1.23	1.82	2.50	1.20	1.56	1.60	1.28
Yield	3.98	3.73	5.60	4.11	3.60	3.78	2.78	3.32	3.07	2.79	3.58	4.06	4.62	3.43	3.95	3.32	3.95	3.71	3.61
10/30/2015	49.42	57.07	17.52	64.65	79.37	68.51	60.52	49.92	63.28	39.92	53.73	26.79	25.37	52.35	62.30	36.42	40.87	41.24	35.01

Stock Price Data Low-High Ranking for Yield Calculation 6/1/2015 to 11/30/2015

10/29/2015	49.43	57.69	17.77	64.72	80.36	68.70	60.64	50.42	64.09	40.00	53.92	27.46	25.67	52.50	62.32	36.76	40.92	41.81	35.03
10/28/2015	49.48	57.84	18.00	64.74	80.60	69.12	61.23	50.51	64.14	40.02	54.05	27.69	26.21	52.58	62.83	36.89	40.97	41.95	35.04
10/27/2015	49.72	57.94	18.13	64.79	80.72	69.12	62.18	50.63	64.21	40.19	54.11	27.74	26.49	52.73	63.17	36.95	41.02	41.98	35.26
10/26/2015	49.74	58.19	18.22	64.85	81.12	69.66	62.94	50.64	64.65	40.81	54.19	27.91	26.88	52.74	63.30	36.96	41.36	42.21	35.33
10/23/2015	49.84	58.40	18.23	64.94	81.14	70.05	63.04	50.76	65.32	40.99	54.20	28.38	26.98	52.77	63.36	37.08	41.42	42.75	35.51
10/22/2015	49.85	58.42	18.27	64.96	81.15	70.21	63.12	50.94	65.62	40.99	54.66	28.39	27.08	52.95	63.44	37.33	41.87	42.77	35.51
10/21/2015	49.99	58.67	18.27	65.06	81.35	70.35	63.14	50.95	65.93	41.04	54.75	28.41	27.12	53.00	63.46	37.39	41.90	43.13	35.54
10/20/2015	50.28	58.83	18.28	65.08	81.37	70.76	63.56	50.97	66.34	41.10	54.97	28.41	27.18	53.00	63.51	37.40	41.92	43.25	35.63
10/19/2015	50.44	58.86	18.29	65.57	81.59	70.85	63.59	51.07	66.84	41.40	55.01	28.42	27.20	53.09	63.86	37.41	42.10	43.27	35.84
10/16/2015	50.51	58.99	18.29	65.71	81.60	71.22	63.68	51.10	67.09	41.55	55.02	28.43	27.21	53.11	63.99	37.68	42.23	43.96	35.89
10/15/2015	50.51	59.02	18.31	65.77	81.76	71.32	63.72	51.18	67.21	41.56	55.09	28.48	27.32	53.40	64.08	37.75	42.24	44.43	35.99
10/14/2015	50.59	59.30	18.33	65.94	82.17	71.41	63.82	51.25	67.60	41.63	55.35	28.51	27.46	53.46	64.34	37.76	42.27	44.80	36.04
10/13/2015	50.88	59.81	18.33	66.23	83.26	71.68	64.28	51.72	67.77	41.63	55.63	28.52	27.48	53.63	64.88	38.23	42.30	45.04	36.26
10/12/2015	51.00	59.83	18.36	66.27	83.33	72.12	64.38	51.83	68.25	41.72	55.72	28.71	27.61	53.79	64.89	38.30	42.45	45.17	36.35
10/9/2015	51.01	59.98	18.40	66.32	83.35	72.16	64.43	51.93	68.41	41.86	55.89	28.79	27.65	54.03	64.95	38.31	42.47	45.24	36.43
10/8/2015	51.10	60.04	18.41	66.34	83.49	72.39	64.55	51.98	68.48	41.88	55.98	28.82	27.69	54.05	65.07	38.44	42.74	45.54	36.44
10/7/2015	51.18	60.17	18.43	66.34	83.50	72.45	64.98	52.05	68.52	42.03	55.99	28.85	27.79	54.07	65.10	38.46	42.90	45.56	36.58
10/6/2015	51.28	60.27	18.47	66.38	83.64	72.68	65.02	52.06	68.81	42.10	56.20	28.85	27.80	54.17	65.14	38.49	43.03	45.56	36.63
10/5/2015	51.35	60.43	18.50	66.45	83.78	73.00	65.05	52.20	69.18	42.17	56.27	28.88	27.92	54.29	65.14	38.61	43.12	45.64	36.72
10/2/2015	51.64	60.64	18.50	66.54	83.82	73.23	65.45	52.24	69.36	42.17	56.36	28.92	28.00	54.33	65.21	38.68	43.18	46.18	36.78
10/1/2015	52.26	60.98	18.86	67.07	84.87	73.79	66.09	52.70	69.47	42.32	56.86	29.24	28.22	54.50	65.99	38.89	43.45	46.35	37.14
L	49.42	57.07	17.52	64.65	79.37	68.51	60.52	49.92	63.28	39.92	53.73	26.79	25.37	52.35	62.30	36.42	40.87	41.24	35.01
H	52.26	60.98	18.86	67.07	84.87	73.79	66.09	52.70	69.47	42.32	56.86	29.24	28.22	54.50	65.99	38.89	43.45	46.35	37.14
Avg	50.84	59.02	18.19	65.86	82.12	71.15	63.30	51.31	66.38	41.12	55.30	28.02	26.79	53.42	64.15	37.65	42.16	43.79	36.07
Div	2.02	2.20	0.99	2.60	2.92	2.59	1.67	1.67	2.04	1.18	1.92	1.10	1.23	1.82	2.38	1.20	1.56	1.60	1.28
Yield	3.97	3.73	5.44	3.95	3.56	3.64	2.64	3.25	3.07	2.87	3.47	3.93	4.59	3.41	3.71	3.19	3.70	3.65	3.55
9/30/2015	46.23	54.55	17.28	60.22	74.30	66.60	56.67	45.32	57.16	38.04	48.83	26.54	24.93	47.19	57.60	33.42	38.36	38.39	32.25
9/29/2015	46.38	54.84	17.29	60.66	74.36	66.64	56.83	45.45	57.17	38.10	49.51	26.69	24.99	47.29	58.01	33.42	38.56	38.54	32.32
9/28/2015	46.57	55.01	17.36	60.92	74.44	67.12	56.86	45.50	57.34	38.19	49.66	26.70	25.00	47.47	58.01	33.44	38.59	38.71	32.39
9/25/2015	46.67	55.12	17.44	60.93	75.17	67.16	56.91	45.65	57.55	38.37	49.72	26.73	25.11	47.50	58.27	33.82	38.64	38.71	32.66
9/24/2015	47.32	55.13	17.47	61.00	75.23	67.44	57.15	45.73	57.61	38.56	49.77	26.77	25.12	47.52	59.06	33.82	38.88	38.87	32.76

Stock Price Data Low-High Ranking for Yield Calculation 6/1/2015 to 11/30/2015

9/23/2015	47.46	55.25	17.48	61.23	75.30	67.44	57.22	46.04	57.84	38.79	49.84	26.78	25.13	47.88	59.23	33.99	38.97	38.94	32.78
9/22/2015	47.69	55.38	17.50	61.69	75.40	67.45	57.48	46.06	58.25	39.08	49.88	26.80	25.16	48.02	59.68	34.23	39.10	38.96	32.84
9/21/2015	47.98	55.40	17.50	61.73	75.56	67.45	57.53	46.09	58.30	39.38	49.90	26.85	25.21	48.07	59.79	34.37	39.30	39.03	32.84
9/18/2015	48.05	55.60	17.56	61.98	75.66	67.47	57.83	46.25	58.34	39.56	50.01	26.90	25.21	48.36	59.88	34.46	39.32	39.06	32.97
9/17/2015	48.14	55.60	17.57	62.00	75.78	68.07	58.76	46.70	58.55	39.71	50.27	26.91	25.24	48.38	60.18	34.47	39.59	39.19	33.11
9/16/2015	48.22	56.21	17.57	62.88	76.90	68.10	59.31	46.71	59.55	39.80	50.40	27.03	25.30	48.86	61.09	34.65	39.67	39.73	33.36
9/15/2015	48.32	56.70	17.59	63.83	77.27	68.35	60.44	47.22	60.29	39.87	50.80	27.07	25.53	49.66	61.77	35.13	39.94	40.30	33.63
9/14/2015	48.49	56.75	17.62	64.31	77.80	68.43	60.67	47.47	60.76	40.01	51.08	27.07	25.53	50.10	61.77	35.21	40.15	40.31	33.84
9/11/2015	48.49	56.78	17.64	64.35	77.98	68.57	60.69	47.51	60.88	40.16	51.09	27.19	25.54	50.74	62.20	35.31	40.15	40.37	33.92
9/10/2015	48.73	57.08	17.69	64.37	78.15	68.64	60.88	47.66	60.95	40.24	51.23	27.20	25.55	51.01	62.23	35.55	40.34	40.45	34.11
9/9/2015	48.83	57.15	17.73	64.84	78.23	68.67	61.20	47.72	61.23	40.31	51.40	27.22	25.58	51.55	62.29	35.70	40.59	40.45	34.11
9/8/2015	49.32	57.36	17.78	65.13	78.33	68.77	61.40	48.17	62.77	41.07	52.26	27.31	25.62	51.99	62.63	36.06	40.60	40.71	34.40
9/4/2015	49.43	57.74	17.79	65.21	78.76	68.78	61.63	48.89	63.14	41.16	53.00	27.34	25.72	52.01	63.17	36.14	40.61	40.88	34.64
9/3/2015	50.13	57.98	17.88	65.26	78.77	68.81	61.79	49.09	63.15	41.19	53.14	27.36	25.76	52.01	63.22	36.39	40.89	40.88	34.70
9/2/2015	50.20	58.04	17.93	65.56	79.27	69.40	61.91	49.30	63.23	41.25	53.25	27.50	25.79	52.46	63.52	36.51	40.91	41.07	34.91
9/1/2015	50.49	58.49	18.02	66.15	80.37	69.72	63.07	50.62	64.22	41.61	53.83	27.64	25.86	52.80	64.14	36.97	42.16	42.01	35.41
L	46.23	54.55	17.28	60.22	74.30	66.60	56.67	45.32	57.16	38.04	48.83	26.54	24.93	47.19	57.60	33.42	38.36	38.39	32.25
H	50.49	58.49	18.02	66.15	80.37	69.72	63.07	50.62	64.22	41.61	53.83	27.64	25.86	52.80	64.14	36.97	42.16	42.01	35.41
Avg	48.36	56.52	17.65	63.18	77.34	68.16	59.87	47.97	60.69	39.83	51.33	27.09	25.39	50.00	60.87	35.19	40.26	40.20	33.83
Div	2.02	2.20	0.99	2.60	2.92	2.59	1.67	1.67	2.04	1.18	1.92	1.10	1.23	1.82	2.38	1.20	1.56	1.60	1.28
Yield	4.18	3.89	5.61	4.11	3.78	3.80	2.79	3.48	3.36	2.96	3.74	4.06	4.84	3.64	3.91	3.41	3.87	3.98	3.78
8/31/2015	46.64	56.10	17.67	62.20	75.84	68.93	57.10	46.81	58.39	36.72	50.99	27.45	24.61	48.54	59.53	33.87	39.49	40.23	32.76
8/28/2015	47.41	56.66	17.97	62.63	77.14	68.95	58.09	46.82	58.92	37.53	51.14	27.63	25.17	49.01	59.61	34.25	39.85	40.60	33.22
8/27/2015	47.61	56.67	18.23	62.80	77.33	69.09	58.31	47.64	59.35	37.74	51.82	28.04	25.23	49.15	60.33	34.43	39.87	40.76	33.40
8/26/2015	47.78	57.73	18.35	62.91	78.09	69.84	58.60	47.85	59.73	38.25	51.82	28.43	25.38	49.91	60.48	34.68	40.12	40.97	33.62
8/25/2015	47.80	57.80	18.36	63.10	78.23	69.96	59.14	48.15	60.01	38.46	51.99	28.45	25.47	49.98	60.78	34.75	40.24	41.01	33.67
8/24/2015	47.93	58.04	18.48	63.17	78.35	70.01	59.24	48.47	60.12	38.60	52.65	28.54	25.51	49.99	60.80	34.83	40.25	41.08	33.77
8/21/2015	48.32	60.63	18.53	63.37	78.47	70.36	59.27	48.65	60.15	38.64	52.73	29.35	25.52	51.38	60.85	35.35	40.53	41.35	33.82
8/20/2015	48.46	60.63	18.55	63.48	78.48	70.39	59.28	48.79	60.52	38.65	53.27	29.43	26.39	51.54	61.51	35.42	40.78	41.40	34.09
8/19/2015	48.99	60.65	18.57	63.60	79.14	70.54	59.46	49.08	60.56	38.86	53.33	29.50	26.66	51.71	61.69	35.58	41.19	41.51	34.20
8/18/2015	49.56	60.72	18.63	63.90	79.60	71.00	59.47	49.35	61.28	38.94	53.46	29.73	26.95	51.79	61.92	35.83	41.22	41.64	34.49

Stock Price Data Low-High Ranking for Yield Calculation 6/1/2015 to 11/30/2015

8/17/2015	50.19	60.73	18.70	64.52	79.88	71.01	59.75	49.40	61.43	39.19	53.78	29.92	27.00	52.18	62.25	35.89	41.50	41.64	34.60
8/14/2015	50.59	60.80	18.84	64.52	80.40	71.02	60.18	49.56	61.45	39.21	53.97	29.94	27.17	52.19	62.62	35.95	41.62	41.73	34.91
8/13/2015	50.65	61.08	19.01	65.21	80.46	71.33	60.19	49.95	61.98	39.26	54.17	30.27	27.23	52.44	63.08	36.42	41.89	41.75	35.03
8/12/2015	50.70	61.32	19.04	65.96	82.24	73.11	60.28	50.33	62.59	39.31	54.20	30.38	27.27	52.62	63.27	36.48	42.02	41.95	35.22
8/11/2015	50.98	61.52	19.31	66.06	82.36	73.54	60.60	50.45	62.69	39.32	54.73	30.45	27.35	52.72	63.77	36.73	42.05	42.08	35.22
8/10/2015	51.17	61.59	19.36	66.27	82.37	73.97	60.73	50.57	62.85	39.38	54.88	30.70	27.36	52.90	63.86	36.94	42.08	42.22	35.38
8/7/2015	51.42	61.74	19.54	66.51	82.81	74.00	60.82	50.71	63.21	39.40	54.88	30.80	27.38	53.42	64.34	37.04	42.48	42.22	35.45
8/6/2015	51.55	61.84	19.62	66.67	82.86	74.32	61.33	51.00	63.23	39.51	55.00	30.95	27.44	53.62	64.37	37.05	42.60	42.54	35.56
8/5/2015	51.68	62.33	19.63	66.71	83.33	74.68	61.33	51.14	63.40	39.68	55.19	31.01	27.49	53.66	64.38	37.11	42.72	42.58	35.64
8/4/2015	51.69	62.49	19.64	66.82	83.48	74.73	61.52	51.15	63.47	39.83	55.59	31.07	27.56	53.80	64.59	37.30	42.77	42.61	35.66
8/3/2015	51.93	62.92	19.64	66.87	83.59	74.81	61.72	51.21	63.88	40.02	55.77	31.45	27.62	53.94	64.85	37.45	43.05	42.92	35.97
L	46.64	56.10	17.67	62.20	75.84	68.93	57.10	46.81	58.39	36.72	50.99	27.45	24.61	48.54	59.53	33.87	39.49	40.23	32.76
H	51.93	62.92	19.64	66.87	83.59	74.81	61.72	51.21	63.88	40.02	55.77	31.45	27.62	53.94	64.85	37.45	43.05	42.92	35.97
Avg	49.28	59.51	18.65	64.54	79.71	71.87	59.41	49.01	61.14	38.37	53.38	29.45	26.12	51.24	62.19	35.66	41.27	41.57	34.37
Div	2.02	2.20	0.99	2.60	2.92	2.59	1.67	1.67	1.88	1.18	1.92	1.00	1.23	1.82	2.38	1.20	1.56	1.60	1.28
Yield	4.10	3.70	5.31	4.03	3.66	3.60	2.81	3.41	3.08	3.08	3.60	3.40	4.71	3.55	3.83	3.36	3.78	3.85	3.72
7/31/2015	45.21	57.60	17.80	57.72	74.53	65.83	56.02	45.15	55.73	38.29	48.50	27.81	24.83	48.96	57.02	33.13	39.06	38.27	32.19
7/30/2015	45.77	58.47	17.85	58.57	75.45	66.59	57.16	45.89	56.47	38.47	49.57	27.83	25.08	49.36	57.76	33.48	39.37	39.00	32.50
7/29/2015	46.01	58.56	18.09	59.02	75.50	66.64	57.19	46.09	56.68	38.58	49.89	28.09	25.18	49.60	57.92	33.51	39.39	39.32	32.54
7/28/2015	46.29	58.63	18.12	59.84	75.75	66.97	57.21	46.30	56.96	38.94	49.98	28.10	25.23	49.90	59.10	33.54	39.54	39.70	32.59
7/27/2015	46.48	58.72	18.18	59.91	75.94	67.32	57.26	46.46	57.01	38.96	50.02	28.39	25.24	49.92	59.11	33.70	39.79	39.75	32.62
7/24/2015	46.73	59.05	18.25	60.10	76.14	67.38	57.33	46.61	57.11	39.00	50.04	28.41	25.31	50.16	59.38	33.77	39.90	39.77	32.83
7/23/2015	46.83	59.09	18.38	60.20	76.37	67.46	57.36	46.70	57.19	39.00	50.06	28.44	25.34	50.26	59.41	33.85	39.93	39.84	33.01
7/22/2015	46.83	59.52	18.44	60.22	76.41	67.50	57.55	46.78	57.20	39.04	50.08	28.62	25.71	50.56	59.53	33.89	40.09	40.00	33.02
7/21/2015	46.98	59.54	18.49	60.31	76.53	67.68	57.56	46.87	57.25	39.07	50.17	28.65	25.85	50.68	59.60	33.89	40.28	40.02	33.08
7/20/2015	47.03	59.70	18.57	60.49	76.63	67.81	57.60	46.92	57.25	39.08	50.18	28.73	26.13	50.75	59.63	33.97	40.36	40.03	33.16
7/17/2015	47.06	59.70	18.57	60.56	76.68	67.86	57.72	46.95	57.26	39.15	50.23	28.76	26.14	50.78	59.70	34.07	40.47	40.22	33.22
7/16/2015	47.07	59.72	18.61	60.64	76.77	67.92	57.80	47.09	57.32	39.31	50.32	28.81	26.16	50.88	59.74	34.07	40.57	40.27	33.22
7/15/2015	47.30	59.75	18.63	60.71	76.78	68.01	57.86	47.15	57.62	39.38	50.49	28.85	26.43	50.89	59.76	34.15	40.64	40.32	33.23
7/14/2015	47.38	59.85	18.66	60.81	76.78	68.05	58.01	47.29	57.74	39.40	50.72	28.87	26.44	50.96	59.76	34.19	40.79	40.35	33.27
7/13/2015	47.40	59.86	18.70	60.89	77.23	68.14	58.15	47.39	58.05	39.75	50.94	28.92	26.44	50.98	59.84	34.20	40.85	40.41	33.30

Stock Price Data Low-High Ranking for Yield Calculation 6/1/2015 to 11/30/2015

7/10/2015	47.46	59.92	18.70	61.03	77.80	68.23	58.44	47.43	58.11	39.77	51.04	28.99	26.45	50.99	60.22	34.21	40.85	40.42	33.37
7/9/2015	47.53	59.99	18.72	61.12	77.82	68.36	58.49	47.48	58.29	39.77	51.08	29.00	26.52	51.38	60.38	34.47	40.93	40.54	33.38
7/8/2015	47.59	60.23	18.74	61.30	77.88	68.83	58.53	47.68	58.31	39.93	52.06	29.10	26.55	51.73	60.50	34.48	40.97	40.66	33.40
7/7/2015	47.62	60.42	18.75	61.60	77.94	68.88	58.68	47.85	58.78	39.95	52.18	29.28	26.58	51.82	60.58	34.77	41.00	40.78	33.56
7/6/2015	47.62	60.78	18.82	61.74	78.56	69.34	58.74	47.86	59.55	40.07	52.53	29.35	26.61	51.83	60.93	35.20	41.23	41.00	33.79
7/2/2015	47.81	60.97	18.83	62.54	78.80	69.73	59.13	48.33	60.39	40.12	52.88	29.45	26.74	51.89	61.27	35.37	41.26	41.14	33.88
7/1/2015	47.82	61.51	19.07	62.98	79.70	70.37	59.61	49.27	61.17	40.33	53.32	29.76	26.76	52.06	61.71	35.71	41.47	41.72	34.34
L	45.21	57.60	17.80	57.72	74.53	65.83	56.02	45.15	55.73	38.29	48.50	27.81	24.83	48.96	57.02	33.13	39.06	38.27	32.19
H	47.82	61.51	19.07	62.98	79.70	70.37	59.61	49.27	61.17	40.33	53.32	29.76	26.76	52.06	61.71	35.71	41.47	41.72	34.34
Avg	46.52	59.56	18.44	60.35	77.12	68.10	57.81	47.21	58.45	39.31	50.91	28.78	25.80	50.51	59.37	34.42	40.27	40.00	33.26
Div	2.02	2.20	0.99	2.60	2.92	2.59	1.67	1.67	1.88	1.18	1.92	1.00	1.23	1.82	2.38	1.20	1.56	1.60	1.28
Yield	4.34	3.69	5.37	4.31	3.79	3.80	2.89	3.54	3.22	3.00	3.77	3.47	4.77	3.60	4.01	3.49	3.87	4.00	3.85
6/30/2015	45.93	56.85	18.52	56.66	73.09	65.56	55.21	45.00	54.93	36.92	48.28	28.33	25.58	48.68	55.77	32.70	38.75	38.14	31.61
6/29/2015	46.35	57.02	18.57	56.94	73.14	65.59	55.21	45.09	55.19	36.95	48.47	28.41	25.74	48.72	55.97	32.71	38.83	38.55	31.68
6/26/2015	46.47	57.16	18.62	56.98	73.15	65.61	55.28	45.10	55.21	36.96	48.55	28.45	25.85	48.91	56.03	32.79	38.89	38.76	31.70
6/25/2015	46.71	57.20	18.65	56.98	73.16	65.63	55.31	45.15	55.29	37.03	48.64	28.71	25.91	48.93	56.10	32.83	39.20	39.00	31.72
6/24/2015	47.34	57.28	18.66	57.19	73.20	65.69	55.85	45.43	55.41	37.30	48.65	28.72	26.00	48.97	56.34	32.88	39.22	39.03	31.73
6/23/2015	47.42	57.31	18.67	57.28	73.38	65.80	56.39	45.57	55.56	37.34	48.99	28.83	26.23	49.22	56.34	32.89	39.31	39.29	31.73
6/22/2015	47.51	57.34	18.74	57.32	73.40	65.86	56.45	45.60	55.56	37.35	49.03	28.86	26.23	49.27	56.35	32.90	39.61	39.44	31.86
6/19/2015	47.61	57.51	18.74	57.48	73.55	65.90	56.55	45.68	55.66	37.64	49.11	28.90	26.31	49.35	56.41	32.93	39.74	39.59	31.87
6/18/2015	47.76	57.51	18.77	57.51	73.64	66.02	56.61	45.76	55.66	37.78	49.14	28.90	26.34	49.44	56.45	32.93	39.74	39.60	31.87
6/17/2015	47.89	57.59	18.78	57.54	73.66	66.02	56.71	45.91	55.68	37.87	49.15	28.99	26.35	49.54	56.54	33.04	39.77	39.61	31.92
6/16/2015	47.93	57.59	18.80	57.57	73.94	66.04	56.77	45.91	55.70	38.30	49.38	29.00	26.36	49.55	56.63	33.07	39.79	39.61	31.93
6/15/2015	48.21	57.75	18.82	57.68	73.94	66.12	56.82	46.14	55.82	38.33	49.40	29.03	26.39	49.72	56.69	33.16	39.84	39.62	32.07
6/12/2015	48.39	57.76	18.83	57.88	74.11	66.31	56.87	46.23	55.92	38.43	49.50	29.05	26.39	49.89	56.75	33.18	40.00	39.82	32.07
6/11/2015	48.53	58.06	18.87	57.96	74.26	66.40	57.05	46.25	55.96	38.60	49.60	29.20	26.45	49.90	57.07	33.23	40.01	39.93	32.13
6/10/2015	48.64	58.26	18.87	58.04	74.27	66.62	57.17	46.26	56.08	38.84	49.83	29.20	26.48	50.18	57.26	33.30	40.09	40.07	32.17
6/9/2015	48.80	58.51	18.97	58.15	74.68	66.74	57.56	46.31	56.46	38.88	49.83	29.25	26.48	50.25	57.50	33.57	40.12	40.32	32.20
6/8/2015	48.85	58.52	19.00	58.42	74.98	66.79	57.78	46.52	56.52	38.94	50.13	29.52	26.54	50.45	57.50	33.65	40.32	40.36	32.26
6/5/2015	48.94	58.60	19.09	58.63	75.25	67.00	57.79	46.86	56.58	39.05	50.16	29.71	26.57	50.78	57.58	33.70	40.54	40.49	32.38
6/4/2015	49.13	58.89	19.14	59.11	75.26	67.16	58.01	47.01	57.01	39.06	50.44	29.79	26.65	50.93	57.90	33.71	40.58	40.57	32.45

Stock Price Data Low-High Ranking for Yield Calculation 6/1/2015 to 11/30/2015

6/3/2015	49.27	59.07	19.18	59.19	75.33	67.57	58.03	47.25	57.12	39.38	50.50	30.05	26.71	51.05	58.12	33.76	40.77	40.75	32.73
6/2/2015	49.29	59.97	19.20	60.50	76.40	68.30	58.70	48.05	57.60	39.66	50.58	30.29	26.77	51.96	59.07	33.81	41.47	41.45	32.75
6/1/2015	49.94	60.83	19.68	61.11	77.79	69.19	59.92	48.74	58.43	39.85	51.04	31.04	27.11	52.71	60.32	34.34	42.08	42.16	33.41
L	45.93	56.85	18.52	56.66	73.09	65.56	55.21	45.00	54.93	36.92	48.28	28.33	25.58	48.68	55.77	32.70	38.75	38.14	31.61
H	49.94	60.83	19.68	61.11	77.79	69.19	59.92	48.74	58.43	39.85	51.04	31.04	27.11	52.71	60.32	34.34	42.08	42.16	33.41
Avg	47.94	58.84	19.10	58.89	75.44	67.38	57.56	46.87	56.68	38.38	49.66	29.68	26.34	50.69	58.04	33.52	40.42	40.15	32.51
Div	2.02	2.20	0.99	2.60	2.92	2.59	1.67	1.67	1.88	1.18	1.92	1.00	1.23	1.82	2.38	1.20	1.56	1.60	1.28
Yield	4.21	3.74	5.18	4.42	3.87	3.84	2.90	3.56	3.32	3.07	3.87	3.37	4.67	3.59	4.10	3.58	3.86	3.99	3.94

Avg 6 month H- L Yield	4.13	3.75	5.42	4.15	3.71	3.74	2.80	3.43	3.19	2.96	3.67	3.71	4.70	3.54	3.92	3.39	3.84	3.86	3.74
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Avg Price to Check Above Yld	49.04	58.77	18.25	62.43	78.47	68.89	59.58	48.59	61.34	39.91	52.25	28.28	26.31	51.38	61.13	35.35	40.47	41.30	34.13
Div	2.02	2.20	0.99	2.60	2.92	2.59	1.67	1.67	2.04	1.18	1.92	1.10	1.23	1.82	2.50	1.20	1.56	1.60	1.28
Yld Ck	4.12	3.74	5.42	4.16	3.72	3.76	2.80	3.44	3.33	2.96	3.67	3.89	4.68	3.54	4.09	3.39	3.86	3.87	3.75